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ABSTRACT

In order to provide federal policymakers with an adequate background of information on the issues of vocational education and private sector (VEPS) cooperation, an analysis was made of the context of current VEPS cooperative practices. The analysis revealed that although the concept of cooperation is simple and appealing, it is very difficult to implement. Several factors appeared to undermine the effectiveness of cooperative activities. Included among these were the following: the existence of current cooperative practices that are described as fragmented, duplicative, and ad hoc; the use of volunteerism as the basis for cooperation; and the lack of available funds for vocational education linkage activities. When these factors are coupled with other underlying issues (such as the infringement of the private sector in the training enterprise, delineation of who should bear the cost of training, and the perceived inability of vocational educators to respond quickly to technological changes), the dire need for policy initiatives in this area becomes evident. Based on an analysis of these issues, four policy options were set forth that gave rise to 28 policy alternatives. These alternatives were then limited to 12 possible policy alternatives. (Appended to this report are a sample listing of VEPS cooperating practices and an initial evaluation of 28 policy options.) (MN)

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Information Series No. 281

PRIVATE SECTOR INVOLVEMENT WITH THE VOCATIONAL COMMUNITY: AN ANALYSIS OF POLICY OPTIONS

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1984

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FOREWORD

Vocational education programs in the United States serve a diverse clientele with a multitude of programs in complex and diverse settings. The diversity and complexity of these settings contribute, in fact, to the federal policymaker's dilemma: how to formulate federal educational policy that is relevant in all settings.

Policy analysis, too, is complex and multi-opinionated. This dual complexity of programs and policy analysis presents special problems for developers of policy options. The policy analysts role is seldom simple, but the search for policy alternatives that are meaningful and useable is an essential undertaking if vocational education is to move forward.

Federal policymakers are the primary audience for this policy paper. However, state and local policymakers should find the presentation of policy options and the discussion of their advantages and disadvantages to be useful.

The National Center expresses its appreciation to Clyde F. Maurice, the policy paper author. Dr. Maurice is an Assistant Professor in the Department of Educational Leadership at Florida State University. Originally from Trinidad, West Indies, he received a Ph.D. in Vocational Education from the University of Minnesota.

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The National Center is indebted to the staff members who worked on the study. The study was conducted in the Information Systems Division, Dr. Joel Magisos, Associate Director. Dr. Floyd L. McKinney, Senior Research Specialist, served as Project Director and Alan Kohan as Graduate Research Associate. Dr. McKinney, a former secondary vocational education teacher, holds a Ph.D. in vocational education from Michigan State University. He has served as a university coordinator of graduate vocational education programs and as a division director in a state department of education. Mr. Kohan is a doctoral candidate in comprehensive vocational education at The Ohio State University and has a M.Ed. in Curriculum and Instruction from the University of Hawaii.

Patsy Slone served as secretary for the project. Joan Blank and Roxi Liming provided technical editing and final editorial review of the paper was provided by Janet Kiplinger of the National Center's Editorial Services area.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

PREFACE

Federal policymakers need to be aware of alternative policy options before they can make decisions regarding the optimal resolution of critical problems in vocational education. By utilizing the expertise of vocational educators, the policy options should provide policymakers with information regarding anticipated impact, advantages and disadvantages of each alternative.

Recognizing this need of federal policymakers, the U.S. Department of Education, Office of Vocational and Adult Education (OVAE) requested that the National Center for Research in Vocational Education conduct a study for the purpose of preparing policy analysis papers in eight priority areas of high national interest. The areas identified by OVAE were (1) private sector involvement with the vocational community, (2) entrepreneurship, (3) defense preparedness, (4) high technology, (5) youth employment, (6) special needs of special populations, (7) excellence in education, and (8) educational technology.

In accordance with the instructions received from the Office of Vocational and Adult Education, The National Center for Research in Vocational Education conducted a limited competitive search for authors who would develop policy analysis papers on the eight critical issues in vocational education. Vocational education faculty members from educational professional development (EPD) institutions of higher education entered the competition by submitting a five-page proposal. No proposals were received on the topic of defense preparedness. After an extensive internal and external review process, eight authors were approved by the Assistant Secretary for Vocational Education, U.S. Department of Education.

The authors were provided assistance in policy analysis procedures, identification of relevant literature, and feedback on draft papers by policy analysts and educators. The authors presented their papers at a seminar in Washington, D.C., for key federal vocational education policymakers.

Other policy papers produced in this series are:

- George H. Copa, University of Minnesota
  Vocational Education and Youth Employment
- Andrew A. Helwig, East Texas State University
  Alternative Training Options For Structurally Unemployed Older Workers
- Dennis R. Herschbach, University of Maryland
  Addressing Vocational Training and Retraining Through Educational Technology: Policy Alternatives
- Ruth P. Hughes, Iowa State University
  Secondary Vocational Education: Imperative for Excellence

- L. Allen Phelps, University of Illinois
  An Analysis of Fiscal Policy Alternatives for Serving Special Populations in Vocational Education

- N. Alan Sheppard, Morgan State University, formerly at Virginia Polytechnic Institute and State University
  A Policy Analysis of Professional Development and Personnel Preparation for Serving Special Populations

- Gordon I. Swanson, University of Minnesota
  Excellence in Vocational Education: A Policy Perspective

Floyd L. McKinney
Project Director and Senior Research Specialist

Alan Kohan
Graduate Research Associate

EXECUTIVE SUMMARY

This paper provides an analysis of policy options in the area of vocational-education/private-sector (VEPS) cooperation. Although its primary audience is federal policymakers, it is also intended for state and local personnel who are concerned with strengthening the ties between vocational education and the private sector.

The intent of the paper is to enable policymakers to acquire an adequate background of information to enable them to make rational choices among suggested policy alternatives. Consistent with this objective, an attempt was made to provide two types of information: (1) information to understand the context of the problem and (2) information to understand the environment for policy development and implementation. Together, these two streams of information provided a foundation for recommending policy options, as well as a backdrop for policy deliberation and implementation.

The attempt to understand the context of current VEPS cooperative practice revealed that, although the concept of cooperation is simple and appealing, it is very difficult to implement. Several factors seem to undermine the effectiveness of cooperative activities. There is an historical inability for education and industry to overcome inherent differences; current cooperative practices are described as "fragmented, duplicative, and ad hoc"; voluntarism as the basis for cooperation sometimes detracts from the ability of vocational education to maintain a consistent philosophical focus; and funds are not available for vocational education linkages activities. But these are only a few of the problems. When coupled with other underlying issues (e.g., infringement of the private sector in the training enterprise, determination of who should bear the cost of training, the perceived inability of vocational education to respond quickly to technological changes), the dire need for policy initiatives in this area is quite evident.

Policies, however, cannot be pursued before there is some in-depth consideration of policy development and implementation issues. A policy objective must be determined, the perspectives of interest groups must be captured, the legal framework within which policies are to be implemented must be understood, and the alternative policies must be analyzed in a variety of ways to assess their feasibility.

With these issues providing a framework, four policy options are set forth that give rise to twenty-eight policy alternatives. Using criteria and input from the field, these have been limited to twelve possible policy alternatives. They are as follows:

- Vocational education planning requirements could be restructured to reflect the priority given to vocational-education/private-sector cooperation.

- Incentives should be provided for local companies to support vocational education programs.

- Government should partially (or fully) fund a private-sector coordinator at each postsecondary vocational institution.
- Government should provide funds to industry for professional updating of teachers.
- Government should provide funds to encourage the development of multi-agency technology priority councils to develop training priorities.
- Government should provide funds for large demonstration projects to develop and implement vocational-education/private-sector cooperative structures to address specific problems experienced in vocational education.
- Government should provide funds for development of a registry of employees from "state-of-the-art" industrial facilities who would be available for loan to vocational institutions.
- Government should sponsor speciality training centers or centers of excellence for each vocational education program area in each state. These should be industry based and industry controlled.
- Incentives should be provided for the initiation of adopt-a-program cooperative relationships to secure industry support for vocational programs.
- Government should create a vocational-education/private-sector cooperation foundation in each state through the funds secured from a small corporate tax.
- Government should provide the fiscal encouragement for industries to develop industry assistance plans for providing assistance to schools.
- Government should issue federal contracts to industries for providing services to vocational education institutions.

These twelve alternatives are explored in more detail regarding their effects, consequences, possibility for successful implementation, political feasibility, and potential for change of status quo.

The rainbow of hope is on the horizon of VEPS cooperative activities. Given the flurry of activities and the depth of concern in the vocational education community, the vision of truly integrated vocational-education/private-sector cooperative ties is something more than empty hope. With a willingness to understand, accommodate, and share, and with the presence of adequate policy stimuli, our faintest hopes can materialize. The gap between training and production or the hiatus between education and work may someday be indistinguishable.

CHAPTER 1

INTRODUCTION

The subject addressed in this paper is the involvement of the private sector with the vocational community. The subject is part of the domain of content (and practice) that is conventionally referred to as industry-education cooperation or business-industry-education linkage. Since the paper is directed primarily to policymakers at the national level, it has two policy-oriented foci: to provide a foundation and structure for the formulation of policy, and to develop and analyze appropriate policy options. The foundation aspect of the paper assesses what exists in the arena of vocational-education/private-sector (VEPS) cooperation so that the context and object of policy suggestions can be clear; the policy development and analysis aspect explores alternative policy measures that can be implemented to promote and nurture effective linkage arrangements.

But why is such a policy investigation necessary? Most of us in vocational education have been so bombarded by terms such as cooperation, collaboration, linkage, and networking that our first impulse is to dismiss any such analysis as merely one of the passing episodes in the continuing discourse about the virtues of cooperation with the private sector. It is not. In vocational education we have reached a period of reassessment where we must provide the scrutiny and direction necessary for strengthening our ties with the private sector. This paper provides the requisite foundation for such an undertaking.

This introductory section serves two functions: (1) it notes the paradox of cooperation as conceptualized and practiced—which is simple, yet extraordinarily complex; and (2) it emphasizes the importance of pursuing this policy investigation.

The Paradox

Terms such as cooperation, coordination, and linkage are intuitively appealing. Usually, they represent something that is inherently good in social and organizational behavior. Thus, in speaking of the involvement of the private sector with the vocational community, there is the intuitive appeal and the inherent good that such arrangements connote.

But while the appeal of the concept of linkage between vocational education and the private sector is not overstated, neither is it new. To link vocational education with industry is to align two complementary social responsibilities—that of preparing individuals for the world of work and that of producing goods and services for social consumption. Merging education with the world of work must be appealing because so many benefits could accrue. Even our predecessors in vocational education recognized the wisdom of such efforts. As Barton (1981) recollected, the conception of public vocational education in 1917 was a collaborative effort of representatives from the industrial and educational communities. Each recognized the commonality of interests, and each had foreseen the potential for mutual benefit.

The equation was simple. If vocational education prepared individuals with requisite occupational skills, then business and industry would utilize these trained individuals in the production of goods and services. As conceived and practiced, it was truly a complementary and mutually beneficial relationship. Yet, Barton laments that the collaboration that started vocational education in 1917 has seriously eroded. Why? The context for delivery of vocational education services has changed: governmental structures have become more complex; the vocational institution as an educational entity has veered farther from the industrial world from which it seeks its content; the world of work is being restructured and redefined; and the rate of technological change is of a magnitude that is unequalled in human history. In addition, this complexity is further enhanced by parochialism, turf protection, and the desire to retain traditional structures that currently exist both in education and industry. Since these changes have precipitated corresponding changes in the context for collaboration, the factors impinging on coordinative relationships between vocational education and the private sector have become equally complex.

The Importance of Industry-Education Cooperation

At no other time in the history of vocational education have strong cooperative relationships with the private sector been as vital as they are today. The need for cooperative ties is all too evident from the subtle and overt mandates to establish linkages. There are fiscal restraints at the federal, state, and local governmental levels; there is increasing discontent on the part of business and industry with the adaptability and responsiveness of vocational education; and there is a dominant pro-private-sector ideology in the present national administration. In addition, the vocational education literature is steeped with reference to practices and problems associated with industry-education cooperation. An ongoing debate rages as to whether future delivery of vocational education will be school based or industry based (Doll 1979; Doll 1980). If there were ever a right time for cooperation to strengthen vocational education, that time is now. The tension, dynamics, and discontent that currently exist provide us with an ideal opportunity for introspection and action.

It is in this light that this policy analysis paper is written. It is introspective because it examines practices, issues, and concerns associated with the establishment of cooperative ties between industry and education. But it is also action oriented, because this examination and synthesis will generate the policy recommendations that will provide a basis for action.

Reason for Pursuing Analysis

Policy analysis and policy recommendations are essential features of the policy development process. Any involvement in this process, however, presupposes that some deficient condition exists that could be addressed or resolved through the adoption of appropriate policies (Gil 1976). To set the tone for analysis, a key question must be posed. This question is whether or not a deficient condition exists in the area of industry-education cooperation in vocational education that could be addressed by policy. In effect, some determination must be made as to why policy is needed in this area.

The following chapters will show that deficient conditions do exist, and therefore, it is entirely appropriate to explore whether policies can resolve and improve these conditions. But more importantly, the need to examine policies in this area rests on the fact that cooperative ties with industry may be a mechanism for addressing many of the problems faced by the vocational education community. In this light, the deficient conditions are not rooted solely in the current linkages with industry; rather, they extend to broader problems and issues affecting vocational education in general.

If a deficient condition exists, then the need arises to analyze this condition and then generate policy options. The approach must be sensitive to (1) problem-specific concerns and (2) policy-specific concerns. Problem-specific concerns require understanding of particular problems or deficient conditions so that appropriate policy measures can be designed to remedy them. Policy-specific concerns, on the other hand, assess the context for successfully adopting and implementing policy options. While the first is substantive and concerned with the condition that warrants policy, the second is political and deals with the idiosyncracies of the policy development process.

The problem-specific part of the anlysis tries to assess the status of cooperative activities between vocational education and the private sector. It endeavors to determine the kind of cooperative arrangements that are currently in effect and to determine those deficient conditions (problems, issues, and concerns) that can be addressed by policy directives. To accomplish this, a thorough examination of the literature on industry-education cooperation was conducted, and discussions were held with individuals who are engaged in or somehow involved with cooperative activities with the private sector. Four categories of information were elicited from these sources: current cooperative practices, problems experienced, facilitative factors and circumstances, and related concerns and issues.

These data provided a broad sense of vocational education's involvement with the private sector. But this information only addressed what is occurring, not why such occurrences are taking place. Merely noting problems, facilitative factors, and concerns and issues does not, in itself, foster effective policy intervention. Unless an awareness exists as to why problems arise, or how facilitative factors contribute to effective functioning, no viable policy directives will be formulated.

All this goes back to the question, "What information does the policymaker need?" As Finsterbusch and Motz (1980) note, the policymaker must be attuned to the "social condition that requires a policy decision" (p. 16). In this context, "social condition" is analogous to practices, problems, and concerns related to VEPS cooperation. But these authors also note that decision makers need to be aware of latent factors underlying observed practices and problems. Understanding such factors means comprehending the behavioral dynamics undergirding cooperative activities and answering the question, "Why?" In short, these factors seem to explain certain observed occurrences.

To understand the role of these latent factors in VEPS cooperation, the literature on inter-organizational theory was tapped to derive variables that could account for the successes and failures of cooperative ventures. To assess whether these variables had any relevance to vocational education's relationship to the private sector, the literature in vocational education and training in general was analyzed to elicit appropriate evidence.

This problem-specific analysis contributes to an in-depth understanding of the problem. The paper assumes that such an understanding is critical to formulating and implementing effective policies. The paper further assumes that such information is the initial building block from which policy alternatives are formulated.

But any analysis of this type would be incomplete without giving due consideration to policy-specific concerns. Such concerns are important since problems (or deficient conditions) are addressed by policies, and policies are formulated in a policy system. As noted by Dunn (1981) and Dye (1978), there are three elements of a policy system—the stakeholders, the existing public policies, and the policy environment. Each of these is critical to successful policy formation, and, correspondingly, each should be considered in prior analysis. The policy stakeholders are individuals or groups who have a stake in the policy because they affect and are affected by governmen-

tal decisions (Dunn 1981). Existing public policies represent the existing policy framework within which new policies will be implemented, whereas the policy environment "is the specific context in which events surrounding a policy issue occur" (p. 47).

In the analysis presented here, an attempt was made to secure information on who the stakeholders are and to assess their relative positions on alternative policy options. This part of the analysis required the identification of groups that would be affected by (and groups that would affect) any decisions relating to cooperative activities between vocational education and the private sector. After these groups were identified, an attempt was made to project their respective positions on selected policy options. It was assumed that the role and responsibilities of each group will dictate the intensity of their commitment to their members. This will, in turn, dictate the positions they are willing to take on policy initiatives. This information is critical since the support or resistance of these groups will determine whether or not certain policies could be adopted.

For policy mandates to be effective, however, there must be full awareness of other relevant policies or the policy framework within which new policies will be adopted. This knowledge will enhance the probability that policies will be mutually supportive and nonduplicative. To validate this assumption, an examination was made to identify other relevant policies, and an assessment was made to determine whether these policies would support, contradict, or in some other way influence the policy alternatives suggested.

To determine further the degree of external influence on the suggested policy alternatives, mitigating factors in the policy environment were noted. These factors included current moods, trends, or issues that would engender support or resistance to selected policy options. Several sources provided information on mitigating factors: published materials, interviews with key individuals who are involved in industry-education cooperative (IEC) activities, and discussion with colleagues and students at the Florida State University.

Organization of Content for Presentation

To address properly the concerns mentioned in the preceding paragraphs, the remainder of the paper is divided into five sections: (1) the practice of cooperation between vocational education and the private sector (VEPS), (2) considerations for policy deliberation, (3) a compendium of policy alternatives, (4) detailed analysis of recommended policies, and (5) concluding comments.

In Chapter 2, "The Practice of Cooperation between Vocational Education and the Private Sector," information is provided to capture the present status of vocational education's involvement with business and industry. The section identifies who the cooperating agents are; it details the nature of cooperative practices; documents problems, issues, and concerns associated with cooperative arrangements; and provides a summary to focus the deficient conditions that could be addressed by policy. This section of the paper will have addressed what was previously referred to as problem-specific concerns.

The sections that follow will be devoted to policy-specific concerns. Chpater 3, covering "Considerations for Policy Deliberations," will lay the groundwork for determining the feasibility of policy suggestions. It will respond to the following questions: What are the alternative explanations for the circumstances that arise to create deficient conditions? If a federal role is taken, what policy objective should be pursued? What are the other relevant policies providing a framework within which suggested policies must fit? What groups could potentially be active in the policy arena?

What characteristics of participating groups will infer potential for resistance or support? And, what are the potential obstacles or barriers to policy development?

Chapter 4, "A Compendium of Policy Alternatives," lays a framework for deliberating about policy options. It describes four policy options and several alternative policies within each of those options. A preliminary analysis was conducted to select the most promising of these alternatives for more in-depth analysis and description. Evaluative criteria included: the cost and benefits of each policy with respect to clients, key interest groups, and oversight agencies; advantages and disadvantages of each; resistance potential; short- and long-range effects; intended and unintended consequences; possibilities for successful implementation (with reason where necessary); political feasibility, unique constraints; and the potential for change in status quo (resource allocation, status allocation, organizational arrangements). Selected professionals in vocational education were consulted so that each policy could be rated on a five-point scale according to the specified criteria. The ratings were used for comparative evaluation of the policy alternatives to select from among them the most promising for more in-depth analysis.

Chapter 5, entitled "Detailed Analysis of Recommended Policies," describes the policies selected using some of the same criteria noted in the preceding paragraph. In addition to describing these policies in more detail, suggestions will be provided on the following: possible implementation strategies, provisions for monitoring and evaluation, and barriers and facilitators associated with the implementation of each.

Chapter 6, the "Conclusion," offers final remarks about the involvement of vocational education with the private sector and about the role of federal, state, and local governments in fostering strong ties between them.

CHAPTER 2

THE PRACTICE OF COOPERATION BETWEEN VOCATIONAL EDUCATION AND THE PRIVATE SECTOR

Recently, a resurgence of concern about cooperation between the educational and business communities has arisen. It is reminiscent of Naisbit's (1982) assertion that our society is moving from hierarchical structures to networks, and that networks are the wave of the future. If networks will, indeed, be the nature of future organizational structures, policymakers will need to examine the cooperative practices between vocational education and the private sector. Only then can they ensure that their policy decisions are on the correct course and will result in strong and viable interorganizational arrangements. This chapter will examine the nature of existing arrangements.

The Cooperating Entities

Cooperative endeavors between vocational education and the private sector refer to two primary entities: vocational education institutions, representing the educational community, and business and industry, representing the community responsible for the production of goods and the delivery of services. But for any kind of detailed analysis, this dichotomous perception would not suffice.

As Pratzner (1983) notes, industry is not a monolithic enterprise. Neither is education. There are a variety of vocational education institutions and an even greater variety of business and industrial establishments. Any permutation of various combinations will be astounding. To the extent that specific industries and specific vocational education institutions each have unique features (philosophically, structurally, or otherwise), the nature of the cooperative bond between them may be different.

But these two major bodies are only part of the network of cooperating entities. Policies must also be sensitive and responsive to the variety of associations or bodies that function at the periphery of the vocational education and industrial communities. Although these peripheral associations or bodies are not in the mainstream of vocational education and industrial functions, they nevertheless can exert enormous influence on their respective educational and industrial practices. In the educational sector, school boards, professional associations, and parental groups cannot be ignored; in the private sector, the Chambers of Commerce, bargaining bodies, or professional associations promoting industrial interest cannot be overlooked.

Cooperative Practices

Reasons

Engaging in cooperative practices presumes that there are some underlying reasons as to why cooperating entities find such practices necessary. As one author has pointed out (Evans 1978),

there must be some perception of benefits to be gained before cooperative arrangements can be established. The reasons for such arrangements between vocational education and the private sector must be understood so that existing practices can be placed in their proper context.

In vocational education, cooperative activities are justified on many grounds. With decades of training experience behind them, vocational educators argue that their own expertise and an educational infrastructure designed to deliver training make them ready and able to perform in cooperative endeavors. Another common reason offered is the rapidity of technological innovation and the attendant increase in skill requirements. These changes make cooperative ties with the private sector critical if the vocational education community is to stay abreast of technological developments (Pratzner 1983; Kraska 1980).

Still other reasons for cooperation abound: the potential for securing resources from industry in an era of scarce public funds; the potential for joint efforts to make a mutual contribution to the solution of national problems such as the quality of the labor force, productivity decline, structural unemployment, and economic development (Clark 1983b); and the need for the private sector to make some contribution to the solution of problems that are experienced in vocational education (Worthington 1981). The general theme of the argument is that the vocational education community has an in-place training system, and that cooperation is necessary to ensure that the system continues to be effective in making contributions to industry and to the society in general.

The industrial community on the other hand, has a somewhat different but complementary set of reasons for participating in cooperative efforts. The most common reason cited is the need for a competent and committed work force so that industry can make the most of its capital investment and modern technology (Hemmings 1981); or, as Lapin (1983) puts it, "Industry needs a highly motivated and well disciplined work force." In effect, the industrial community sees the school as the labor pool (Clark 1982a) and expects this as the return for the taxes they pay (Bloomquist 1978). But here again, many additional reasons for cooperation are noted: corporate social responsibility (Cabot 1978), creating markets for products, and selling a corporate philosophy. A survey of a sample of Fortune 500 companies revealed that a major reason for the private sector cooperating with schools "was a desire to inform students and the public in general about their field and its role within the economy" (Wise 1981, p. 72). As Clinton (1983) summarily comments, "Partnership is good business."

Practices

Given these reasons underlying cooperative practices, there are many means through which mutual benefits are realized. For ease of comprehension, existing practices (or the means employed to secure benefits from cooperation) will be discussed within the organization of what Ferrin and Arbeiter (1975) referred to as a continuum of school-employer relations. For the purposes of this paper, the concept has been somewhat modified; nevertheless, it serves the same function as originally intended.

The "bondedness" or maturity of cooperative relationships can be placed on a continuum from the level of separation where there is no interaction between cooperating entities, to the level of integration where there is a symbiotic relationship between cooperative bodies. At the lower end of the continuum is the area of *separation* where relationships are characterized by the independence of the industrial and educational entities. No information or resources are shared, and each organization maintains its own sphere of authority. The next level on the continuum is *communication*. Here the school seeks information and advice from industry (or vice versa), yet each still maintains

separate spheres of authority. Then comes the level entitled *cooperation*, which is represented by relationships where the employer becomes involved in various school activities and provides resources to be utilized by the schools. The upper end of the continuum, as originally conceived by Ferrin and Arbeiter (1975), is entitled *collaboration*. Here, "educational functions of both the schools and employers are considered, and a joint program is developed which links these functions in the school and workplace" (Lapin 1983, p. 16). At this level, there is joint planning and mutual recognition of individual needs, yet there are still two spheres of authority, and organizational structures and processes are not modified in either organization to accommodate the objectives of the collaborative effort.

It seems appropriate to consider a level of cooperation that is even beyond these described above. For the present purpose, this level of cooperation may be titled *integration*. At this level, structures within cooperating organizations are modified to accommodate the objectives of the cooperative effort; a joint sphere of authority exists to accomplish the mutual objective; resources are merged in a manner that will most effectively accomplish this objective; and the responsiblity for the success or failure in accomplishing the mutual objectives is shared. Here education and work are placed on a smooth continuum. As Wilson (1981) and Wirtz (1975) clearly note, education and work "must cease to think of themselves as separate worlds and begin to realize that they are integral and coordinate parts of the same world—life" (Wilson 1981, p. 9).

Because of the nature and the history of vocational education, there are very few instances where vocational institutions are not at all involved with the private sector. Whether vocational education is described as secondary or postsecondary, private or public, rural or urban, almost all institutions involve the private sector in some way—if only on vocational advisory committees.

At the *communication* level, the vocational institution seeks, and the private sector provides, information. The most common cooperative practice is to involve private-sector representatives on vocational advisory committees to secure information on training needs and curricular content, among other things. But there are other forms of cooperation: use of resource persons (guest speakers) from the private sector; visits to respective industrial establishments (field trips); and provision of labor market information. Although the few representative activities here are important, they do not imply a firm bond between vocational education and the private sector.

This bond is immensely improved through those activities that are labeled *cooperative*. Some of the cooperative practices here include: donation of equipment, land, and other intangibles (Topougis 1983); cooperative planning as detailed by Clark and Rinehart (1982, p. 4); job placement arrangements where the schools are responsible for screening and referrals; development of competency measures for vocational skill areas (Wilson 1981); staff-industry exchange programs where teachers, administrators, and industry production and management personnel alternate periods between the school and the workplace (Kline 1982); and a variety of other cooperative practices. More of these cooperative practices are listed in appendix A. The autonomy of participating organizations, in addition to the flexibility allowed and minimal restraints encountered, make such arrangements appealing.

This may account for the fact that there are very few arrangements that can be described as truly *collaborative*. Collaborative efforts require joint programming for creating a closer bond between the school and the workplace. These arrangements, however, would require some sacrifice of autonomy and flexibility. Nevertheless, some examples do exist. Rapid reaction units called industry services are one type. These work collaboratively with other agencies to enhance economic development by attracting new and expanding industries. These units provide tailored training programs to lure companies with the availability of a competent workforce.

Other examples include the following: The technology exchange center concept that links education, industry, labor, and government in a collaborative effort to aid in the transition between school and work (Lapin 1983, p. 17); the formulation of industry-education councils to facilitate linkage activities (NAIEC n.d.); joint design and delivery of courses; company initiation of apprenticeship programs for high school students; and adopt-a-school programs where industries channel their resources to the improvement of a single educational institution. All these represent a level of structure and commitment that goes beyond what is apparent in the earlier cited categories. Yet something is missing. As Clark (1982a) notes, effective linkage requires integration of resources rather then the traditional communication or collaboration.

Integration, the appended category on Ferrin and Arbeiter's (1975) continuum, represents the ultimate bond in cooperative activities. Sentiment for so close a relationship has been expressed by Moss (1983) in his discussion of collaboration as a more continuous integration of effort; by Evans (1983) in his discussion of the concept of "symbiosis"; and by Aslanian and Brickell (1981) in their suggestion of the need for industry and education to go "beyond alliances" (p. 17). The latter authors specifically note that "the relationship between education and work is rapidly changing. The connections between companies and colleges are being welded into a new reality" (p. 17).

Only one example of a practice representing the concept of *integration* can be cited and even it barely approaches the "new reality." This is the "career high schools" concept in Washington, D.C. These institutions are industry-sponsored high schools in engineering and computer sciences that are supported by national corporations at a first-year cost of one million dollars. This dollar amount represents a higher level of commitment on the part of industry. This concept focuses on a specific training objective, and it requires some degree of restructuring on the part of the industrial and educational organizations. Still, the arrangement is not fully integrative since each unit still maintains its individual autonomy and functions from within its traditional structure.

For the purpose of policy formation, it is important to understand what this distribution of cooperative practices along the continuum of "bondedness" implies. The fact that most of these practices fit in the middle of the continuum comments on the immaturity of cooperative relationships, even after decades of pursuing such practices. It leaves open to question whether or not vocational education and the private sector are moving along the right course to mature, cooperative arrangements. If the future environment will be one in which organizational networks instead of hierarchical structures will prevail (Naisbit 1982), then the current maturity of cooperative relationships fails to provide a solid foundation for the future support of strong and viable industry-education ties. But this is only one of the variety of problems in the involvement of vocational education with the private sector.

Problems and Issues Affecting Cooperative Practice

A problem is an unsettling condition or a source of distress, whereas an issue is a point of debate or controversy. Both of these can have negative impacts upon cooperative practices; problems directly influence the successful accomplishment of the collaboration objective, and issues create an atmosphere of doubt and adversity that can undermine the effectiveness of cooperative ventures. A sample of thirteen major problems and five critical issues are identified below for brief discussion in this section.

The problems affecting cooperative practices are as follows:

1. Inability to overcome inherent differences

2. The engulfing nature of a good idea
3. Fragmentation of current cooperative efforts
4. Propensity to maintain existing structures
5. The narrowness of the concept of voluntarism as a basis for cooperation
6. Ill effects of the "outstretched-hands" syndrome
7. Scarcity of funds for linkage activities
8. Minimal involvement of small business in industry-education cooperation
9. Perceived homogeneity of the industrial enterprise
10. Laws of the workplace that discourage cooperation
11. Negative experiences with government policies
12. Institutional flux hampering continuity of relationships
13. The absence of training

Each of these problems will be addressed in turn.

Problem 1: Inability to Overcome Inherent Differences

The end objectives of industrial and educational enterprises are different—one is concerned with delivering goods and services for a profit, the other is concerned with providing educational services and ensuring organizational survival. Over the course of several decades, these traditional roles have created set structures and modes of behavior. And these, of course, are very different. Clark (n.d.), in a National Association for Industry-Education Cooperation newsletter, notes that "business people don't clearly understand the campus' distinct patterns of decision making and educators are hesitant about dealing with business" (p. 1). The hesitancy of educators may be explained by Franchak's (1983) observation that individuals from business and those from industry have different orientations. "Representatives from the private sector may become impatient with time spent on activities such as goal setting, etc., or with a general emphasis on process rather than action. Time is money to business and industry, and time spent in meetings or committees without reaching a decision may soon discourage participation by the private sector" (p. 3).

This, however, is only one of several inherent differences. To the extent that major differences continue to exist, cooperative ties may reach a threshold of maturity beyond which progress is impossible. If this threshold is not at a level at which a firm bond can be created, then the cooperative relationship is stymied. The *policy question* raised here is whether or not resources should continue to be invested in interorganizational relationships which possess inherent features that curtail its success.

Problem 2: The Engulfing Nature of a Good Idea

Industry-education collaboration has such a strong appeal that the popularity of its practice creates a momentum which instills unrealistic expectations among educators and prevents them from exercising foresight and proper judgment in establishing cooperative ties. The belief exists that the knowledge and expertise in the private sector holds the key to solving all the problems confronting vocational education—a panacea for making right everything that is wrong. For instance, Clark (1983d) states that "educational systems and institutions need to engage industry in a long-term effort in reshaping curricula to develop a skilled workforce, improve productivity, reduce structural unemployment, and meet the needs of special groups such as dislocated or displaced workers and minorities—all central to the economic development process" (p. 1). These are very optimistic expectations of what cooperation with industry can accomplish; and these are only a few of the expectations that were noted in the literature. Ripley and Franklin (1983) note that expectations about what can be achieved through private sector involvement are unrealistic. They further warn that "there is nothing magic about private sector involvement that automatically produces "successful" programs" (p. 706). Pratzner (1983) also warns that extreme caution should be exercised in establishing coooperative ties.

If the object of our efforts for establishing cooperative ties with industry are so fragmented, then less and less will be accomplished with the expenditure of valuable and scarce resources. Having too many emphases only encourages cursory attempts at linkages. Having unrealistic expectations breeds frustration among those engaging in linkage efforts, and elicits skepticism from observers who might benefit from our service. The *policy question* raised here is whether federal involvement should provide a consistent focus for linkage efforts and whether policy should be created to help institutions in screening industries before establishing linkage arrangements.

Problem 3: Fragmentation of Current Efforts

Clark (1982a, 1982b, 1983a) has continually asserted that education-industry collaborative effort has continued to be conducted in a fragmented, duplicative, uncoordinated, and ad hoc manner. This, he believes, has greatly diminished the impact of industry-education cooperative activities. Clark (1982c) further notes that one of the reasons for the fractionated character of school-industry relations is the federal approach to providing remedial and short-term solutions rather than preventive and long-term ones. But fractionation can also be due to the lack of direction and information among those who find it necessary to establish cooperative ties with the private sector. To the extent that organizations continue to act individually, the unique circumstances of each situation will result in a mushrooming of cooperative strategies and emphases.

Here again, the *policy question* raised is whether federal involvement should seek to provide a consistent focus and emphasis for linkage efforts, or whether some kind of inducement should be provided to eliminate fragmentation, duplication, and lack of coordination. Clark (1982a) stresses the need for a "coherent strategy" of industry-education collaboration. Policy initiatives can be the basis for the formulation of any coherent strategy.

Problem 4: Propensity to Maintain Existing Structures

There is a strong tendency among vocational education personnel and representatives from business and industry to hold fast to traditional structures and processes. Though common, the

tendency seems more intense in the vocational education community. Aslanian and Brickell (1981) note the differences in structures and perceptions that help to maintain a gap between the education and work communities. Hensley (1978) comments and warns against the proclivity to remain within our existing structures. If there is a built-in resistance to change within the educational community (Paul 1981) and a similar resistance among representatives from industry (Hensley 1978), then the perceived inappropriateness of existing structures will only function to maintain the gap that currently exist. As Youngs and Brooks (1979) point out, our special interests may be our own barriers.

Here again a similar *policy question* can be raised. Should federal (or local) policymakers provide the necessary involvement to create organizational structures that are more favorable for initiating cooperative activities to accomplish training objectives? An even more difficult question is whether or not it is even possible to create new organizational structures through policy incentives.

Problem 5: The Concept of Voluntarism as a Basis for Cooperation

One of the major problems in industry-education cooperation is the concept of voluntarism as a basis of cooperative arrangements. As Clark so often notes, industry education councils are set up to secure industry's *volunteer* resources. Frequent references in the literature seem to lend overwhelming support to this notion. Examples include statements such as "the adopt-a-school programs bring the energy of volunteers" (Franchine 1982, p. 24) and "we must seek industry assistance" (Hubbard 1982, p. 41). In effect, the object of cooperation will be dictated by what industry is willing to volunteer. This places vocational education as a profession in an extremely dependent role and in a very tentative position. Any voluntary participation leaves control in the hands of the volunteers, and the volunteers will, in most cases, limit their contribution to what is in their own interest. As Pake (1981) warns in commenting on industry's contributions to education, "He who pays the piper calls the tune" (p. 48). This viewpoint is implied by Malott (1978), when he states that "it is time for us to apply as rigorous management to giving as we do to earning" (p. 138). The implication here is the attachment of more strings to gifts, the exercise of greater selectivity, and the exertion of more control. In this light, voluntarism only strengthens control and nurtures dependence.

In the long term, a situation of dependence is not in the best interest of vocational education. It is an established fact that cooperation with education is a peripheral activity for industry (Hensley 1978). When voluntarism is the object of cooperation, unfavorable economic conditions for industry may well cut off any voluntary contribution (Ripley and Franklin 1983) because other concerns, such as profit, are of greater importance to the firm than volunteering resources. Therefore, the long-term involvement of industries is unlikley, unless this involvement somehow proves to be continually profitable. Wilson (1981) notes that maximum mutual benefits are achieved when the employer is reasonable assured of resource continuity. Few employers can boast of such assurance for the long-term future.

Another negative effect is the potential that voluntarism can breed fragmentation and duplication. Since there is no control over what is volunteered by industries, similar vocational education programs can have different emphases, based on the nature of industry contributions.

Recognizing the weaknesses of the concept of voluntarism as a basis for effective linkages, Clark (1983c) admits that voluntarism alone is not enough, and Cross (1981) and Aslanian and Brickell (1981) warn that this naive notion of cooperation appears shaky as a future model for the development of effective linkages.

It must be recognized, however, that industry participation will, of necessity, have to be voluntary. It will be difficult to initiate policies that will make industrial participation mandatory. If the proposition is accepted that voluntarism is not in the best interest of the vocational education community, then here lies a true policy dilemma. The *policy question* raised is whether or not policies can be established to secure long-term commitment by indusry to make specific types of contribution. What kinds of inducement would make this possible?

Problem 6: The "Outstretched-Hand" Syndrome

The mirror image of voluntarism is what is referred to here as the "outstretched-hand" syndrome. Essentially, the syndrome is evidenced by the fact that vocational educators, with outstretched-hands, are willing to accept anything that is offered by the private sector; even more educators think primarily (probably solely) in terms of what they can receive from industry. The literature on industry-education cooperation emanating from the educational community is replete with references noting what industry can contribute or what request can be made of the industrial community. Examples of this orientation is evident in articles by Wise (1981), Worthington (1981), and Bloomquist (1978), to mention only a few.

This orientation is unhealthy—if only for the skepticism and suspicion it creates among members of the industrial community. As the National Association of Industry-Education Cooperation (n.d.) states in its handbook, "Businessmen are likely to believe the only assistance educators want from them is dollars" (p. 1). The arguments posed by Mallot (1978) and McLeod (1978), among others, certainly indicate that this belief currently exists. This orientation also raises other issues, and fragmentation can result. But more important, willingness to accept everything that is given can nurture a situation where educational activities are restructured and controlled by what the private sector is willing to contribute. This subject will be addressed in a subsequent section, however.

Here again, the *policy question* raises a dilemma. Should policymakers exert control regarding what schools or localities can request from industry? Can they? Or, for that matter, should policymakers evaluate cooperative ties to ensure their agreement with education ideals?

Problem 7: Funds for Linkage Activities

For decades, the vocational education community has been initiating cooperative relationships with industry. Yet, public funds have never been allocated for the express purpose of supporting coordinating ties. This, perhaps, is consistent with the orientation and expectation that resources will be volunteered by industry. But a base of support for coordinating activities is essential. As Clark and Rinehart (1982) note, linkage projects and processes can flounder because of lack of adequate funding. How much can be expected from linkages if no investment in their proper development and operation is made? The *policy question* here is obvious—should policymakers allocate funds specifically to the development and implementation of linkage arrangements?

Problem 8: Minimal Participation of Small Businesses

Evaluating the participation of the private sector in public employment and training programs, Ripley and Franklin (1983), conclude (among other things) that "small businesses are hard to

reach and are often resistant to significant participation" (p. 703). They emphasize the importance of small business participation by noting its importance for achieving program impact in most localities. If small businesses account for about 70 percent of the nation's new jobs, then their failure to participate is a significant shortcoming of current cooperative practices. If only large industrial concerns participate in industry-education cooperative arrangements (either because of their greater resources or because of the educational community's selectivity), the important resource potential of small businesses will remain untapped.

Should special policy inducements be formulated to encourage the participation of small businesses? Or, before policies are developed, should a research study be commissioned to assess the extent to which this situation obtained?

Problem 9: Perceived Homogeneity

When speaking of the "business community" or the "private sector" in vocational education, we rarely pause to reflect on the meaning of these terms. While it may be convenient to aggregate all industrial enterprises under one form in academic discourse and publication, it would amount to gross negligence in actual practice. Ripley and Franklin (1983) make this point very clear in the following analysis. They state that:

> To talk of "the business community" or "the private sector" is misleading. There is an incredible diversity in types, sizes, and processes in American business and yet this entire array fits under the private sector rubric. And, not only may participation take different forms in companies with very different practices, but localities also vary in several senses. Each locality, of course, has its own economic structure and its own mix of companies. It also has its own history of local employment and training programs; both public and private decision-makers are constrained to some degree by local norms about programs and about the nature of public-private cooperation or non-cooperation. Pledges or decisions made by national headquarters of large companies may not be implemented in the same form (or at all) by branches of that company in different localities. And, of course, most companies have no national headquarters but are purely local. (p. 700)

This excerpt clearly notes the importance of a more detailed understanding of "the business community" or "the private sector." Even more essential, it underscores the importance of perceiving how the unique characteristics of the local environment affect the nature and success of cooperative ties. The intricacies of industry-education linkages are still little understood. Perhaps policy inducements are necessary for the formulation of a theory of industry-education linkages. Or at least, policy initiatives should be sensitive to the complexity of the "private sector" by trying to accommodate the differences in various localities.

Problem 10: Laws that Discourage Cooperation

Some industries may be willing to enter into cooperative arrangements but may hesitate because of perceived legal restrictions. Clark and Rinehart (1982) note that "a common barrier to some linkage processes arises from legislative acts and judicial interpretations" (p. 6). The authors cite examples such as "minimum wage and related laws, civil rights legislation, liability and workmen's compensation," and note that, although such laws are necessary, the rigidity of interpretations is sometimes warranted. Hensley (1978), too, reiterates the legal problems in his discussion

of security, safety, and insurance-related problems. Therefore, before policies are initiated, it is important to understand the legal framework within which the policy will be implemented.

Problem 11: Negative Experiences with Governmental Policies

It is impossible to ignore how governmental policies and practices have imposed a certain amount of reticence in the private sector toward establishing linkages with public institutions, especially when there are federal incentives to engage in such efforts. Such wariness has been fostered by decades of negative experiences with public employment and training programs. Again, Ripley and Franklin's (1983) assessment is worthy of note. They state that "business people are not automatically attracted to public employment and training programs," for they see "government as a regulator and an adversary" (p. 701). The prospect of the burdensome paperwork and the scrutiny of accountability requirements only serve to make worse an already tenuous situation.

Ripley and Franklin (1983) summarize the situation most eloquently:

> Some local business people and some local business communities are unlikely to respond to any overtures to get seriously involved in public employment and training programs. They may have a profound mistrust and dislike of government programs and regulations in general, federally funded activities, or local politicans, bureaucrats, and government agencies (or any combination of the above). (p. 708)

This attribute raises a question as to the efficacy of federal participation in stimulating cooperative arrangements between vocational education and the private sector. If federal policy initiatives are to be instituted, caution should be exercised by federal policymakers to ensure that the residual ill effects of negative experiences are neutralized. This change can be accomplished by the formulation of policies that visibly remove the specter of bureaucratic red tape.

Problem 12: Institutional Flux Hampering Continuity

Time is an important factor if cooperative ties are to reach the stage of maturity. Unfortunately, some cooperative relationships (probably most of them) do not benefit from the necessary length of tenure. As Hensley (1978) notes, the changing roles and responsibilities inside both systems work against the continuity that is essential for formalized and long-term relations. Some of the factors he cites include promotion and reassignment of personnel, and the continuous reorganization of administrative units. This institutional flux hampers continuity and serves to keep the status of cooperation at a basic level.

But changes within an organization need not always have a detrimental effect on cooperative ties. The factor that seems to make the difference is the level of commitment each organization has toward the cooperative venture. Relationships based on corporate social responsiblity to make voluntary contributions would not usually display high levels of commitment; and hence participating industries of this nature may be the type whose cooperative ties will be most affected by organizational changes. Clark (1982c) observes that the field of industry-education cooperation has progressed little within the last fifteen years, despite a blizzard of articles. The explanation for this stagnation may lie in the lack of continuity.

The *policy question* raised here is whether policies can be developed in a manner that will allow for higher levels of commitment from participating industries; or whether the said policies can provide sufficient inducement to participants to ensure the continuity necessary.

Problem 13: Absence of Training

Despite the complexity of industry-education cooperation and the skill and effort it takes to develop and nurture (or maintain) cooperative ties, available training for engaging in cooperative activities is nonexistent. Watson's (1982) suggestions to educators for getting employers to become full partners certainly points to the need to prepare educational personnel to engage in cooperative activities with industry. But many authors (Clark 1983a, Wood 1981) lament that few individuals are prepared for cooperative functions with industry. This lack probably grows from the gross misperceptions in the educational community, the cooperation is automatic and does not require significant effort or training. As Ripley and Franklin (1983) warn, we cannot assume "that such cooperation will develop instinctively" (p. 708).

Here arises the *policy question* as to whether funds should be allocated for training personnel to engage in cooperative activities.

These kinds of problems can undermine any policy effort to enhance cooperation. But they are made even more complex since they are nested in a bed of unresolved issues. Such issues can prevent cooperative ventures from reaching the stage of maturity referred to as integration. Some of the critical issues affecting cooperative practices are as follows:

1. The private sector tends to pursue its own interest at the expense of education.
2. The capacity of vocational education to keep abreast of technological change.
3. The threat of an industry-based system of vocational education.
4. The possibility of sacrificing basic educational goals to fulfill educational needs
5. The question of who should bear the cost of vocational education.

Each of these issues will be addressed in turn.

Issue 1: Self-interest of the Private Sector

When we speak of the involvement of the vocational education community with the private sector, we have visions of two separate entities that are equally committed to enhancing a training system to prepare and upgrade human resources. An examination of pertient literature, however, will quickly dispel such visions, for the literature clearly raises the issue of the motives of the private sector when the latter becomes involved with educational institutions.

The foundation of the issue is the notion that the private sector will persist in pursuing its own interests. Mallot (1978) very strongly suggests that corporate self-interest should guide corporate giving. This approach in itself is not atypical, since it seems reasonable for all organizations to pursue self-interest. But the organizations' interests may not be consistent with the interests of the vocational institutions. For instance, Bloomquist (1978) noted some concerns of a telephone company in a cooperative relationship. Among them were concerns that the students of today are the consumers of tomorrow, and that they would also be tomorrow's educators, legislators and regulators. In some cases, it can be inferred that such objectives reflect the industry's attempt to create a favorable climate in the future by influencing students in the present. Admittedly, in this instance, other educationally acceptable objectives were present; in other cases, they may not be.

The issue of industries providing materials to educational institutions is a case in point. There is controversy charging that teaching materials produced by industry may be biased (Bennett 1979; DuVall and Krepel 1981). Some teachers claim that these materials are ideological and promotional in nature and may conflict with the educational goals for the school (Wise 1981). If such claims are warranted, and if these materials do indeed serve the self-interest of industry, then they can certainly undermine the objectives of the educational institutions. With widespread availability of and receptivity to such materials in vocational education (DuVall and Krepel 1981), doubt arises as to whether these materials are evaluated for potential bias. To the extent that cooperative relationships define receipt of materials as the object of cooperation, the cooperative ventures may be inimical to the purpose of the vocational education.

Clark (1982a) notes that firms in the private sector will elect the kind of initiatives they will support; and while their choices do reflect their interests, the procedure seems completely acceptable since the firms will be contributing their resources. But when their donation of materials has strings attached to it (Cabot 1978), and when their funding of institutions is selective (Malott 1978), and based upon having made a thorough evaluation of a school's philosphy (McLeod 1978), then a justifiable concern is aroused about the extent to which these organizations are willing to pursue their own interests. The cost to educational institutions must also be a matter for concern.

Policymakers must clearly recognize that private sector firms would not participate in the training endeavors out of the goodness of their hearts (Ripley and Franklin, 1983). Measures must be taken to mediate between private-sector self-interest and the objectives of vocational education. Additionally, measures should be considered for educating the vocational education community so that its members become sensitized to the possible, negative spin-off from cooperation.

Issue 2: Vocational Education's Responsiveness to Technological Change

In an era of accelerating technological change, the increasingly complex technologies of tomorrow demand increasingly complex occupational skills (Pratzner 1983). Vocational education is expected to be responsive to these changing occupational needs. But its ability to generate a timely response to technological changes has come under question. Barton (1981) observes that "vocational educators, part of a large bureaucracy, tend to get too isolated from the real world of business and industry." The result, "he states, is that the work world changes and vocational education fails to change with it" (p. 84).

The failure to be responsive (whether perceived or real) widens the gap between vocational education and the private sector. Businesses perceive a vacuum in educational leadership (Ozmon 1982) and hence move in to fill the void. The result is the accelerating increase in industry training programs and independent training organizations, paralleled by the slow isolation of vocational education institutions. Can cooperation with the private sector make vocational education sufficiently responsive to reverse this trend?

Issue 3: The Threat of an Industry-based System of Vocational Education

Recent corporate expenditure on training programs amounted to between $30-$40 billion per year, compared to $7.3 billion invested in public vocational-technical education (Worthington 1981). The increasing investment in training by the private sector raises the question of whether vocational education should be school based or industry based. Although the question has been raised before, current conditions tend to give the issue more credence than it has ever had.

To some observers, there is already enough justification for considering as an alternative industry-based vocational education. Some of the most frequently cited reasons are: (1) the strong feeling among businesses about the inadequacies of vocational education (Barton 1981), (2) lack of up-to-date information in the schools (Pieratt and Wilson 1982), (3) concern that vocational education cannot respond to technological changes, which creates a preference in industry for having their own training programs (Shultz and Strong 1981), and (4) a feeling that vocational education graduates are unprepared for today's world of work (Tjosvold et al. 1981). The general dissatisfaction with public vocational education is the basis for seeking an alternative.

Reasons are offered on both sides as to why each alternative—school based or industry based—is the preferred system for delivering vocational education. Proponents for industry give four key justifications: (a) the flexibility to respond to changes, (b) the immediacy of technological change, and hence the immediacy of the need for training personnel, (c) up-to-date facilities because there is a greater need for investment in these facilities, and (d) the presence of teachers who are automatically updated because of their in-plant location. These result in an up-to-date system of training with minimal distance between education and work (Bertotti 1978).

But Worthington (1981) raises two critical points in defense of vocational education as a public endeavor. He states that "vocational education is more than just skill training—it is an integral part of the system of public education, and that system would certainly suffer if vocational education were summarily separated from it" (p. 74). He further notes that "smaller firms would be grievously hurt if they had to shoulder the entire training burden (p. 74).

Yet, much discussion continues about the potential of industry controlling education. Hensley (1978) expresses the concern of educators that industry's collaborative relationships with the school will lead to external control of schooling. He further expresed the fear that increased cooperation "will lead to a pattern of abdicating responsibility for the curriculum of education to nonprofessional outsiders" (p. 27). Such fears have been growing. Doll (1979, 1980), among others, makes a very strong and convincing case that the future may hold an educational system controlled by large corporations. If this is ever the case, vocational education may be the first area of the public educational system to be taken over. Present conditions suggest that the trend may already have started.

In the state of Florida, the Governor's Commission on Secondary Schools (1983) recommended in its final report that the state should move from school-based vocational education to employer-based education. Such recommendations are not persuasive; but they cannot be casually dismissed. They do indicate the emergence of a philosphical trend that may gain momentum in the future.

The issue has serious implications for policy. Should policymakers take the posture of using the cooperative mechanism to stem the possibility of a corporate takeover? Or, should policies be implemented to facilitate the corporate infringement, ensuring that vocational education is allowed to play an important role in whatever structure may emerge? If this is what the future portends for vocational education, a stand has to be taken now.

Issue 4: Private Sector Cooperation and the Sacrifice of Valued Educational Ideals

In posing arguments to support school-based rather than industry-based vocational education, Worthington (1981) notes that vocational education is more than just skill training, that it is an integral part of the public education system. He further notes that the public education system

would stand to lose if vocational education were separated from it. Barton (1981) made this point earlier in his assessment of federal vocational education policies for the eighties. He firmly asserted that "the first priority is that vocational education be good education" (p. 86). This clearly implies that there is a dimension of vocational education that is beyond skill training. Inherent in our delivery of vocational education are strong and valued educational ideals. Could cooperation with the private sector pose a threat to these ideals?

It is entirely possible. Pratzner (1983) notes that the educational needs and goals of students become secondary to the needs of firms. He further comments that firm-specific and equipment-specific training programs place too much emphasis on the needs of jobs and employers, and not enough on the needs of students. Hoyt (1982), in noting key principles of industry-education cooperation, observes that "it is important to make sure that the industry-education partnership is one that supplements, not detracts, from all of the basic goals of the educational system" (p. 3). The question is whether or not private sector cooperation has caused us to sacrifice our basic educational values.

Industry services programs present a good case in point. Blake (1981) notes that these programs have the capability to provide industry with training that is tailor made to specific company requirements. This emphasis is not consistent with the educational ideals of vocational education that were incorporated into the Smith-Hughes Act in 1917. Again, Pratzner (1983) makes this clear.

> The emergence and rapid growth of firm-specific training programs represents a complete departure from the philosophy and history of public vocational education for the past sixty-six years, since passage of the Smith-Hughes Act of 1917. From its earliest beginnings, occupation-specific rather than employer-specific preparation has been the preferred format for most pre-employment preparation for work. The use of public education institutions and tax monies to support firm-specific training in the interest of state and local economic development makes education the servant of industry.

What does all this imply for policy development? Someone must assume the responsibility for preserving the educational ideals and tradition of vocational education. If vocational education becomes a "servant to industry," then vocational education as an educational endeavor will be stripped of all the values that have accounted for its prominence over the past decades. Policies to be implemented should include measures that would prevent the exploitation of vocational education institutions for the economic benefits of business and industry.

Issue 5: Determining Who Should Bear the Cost of Training

The public makes a significant investment in vocational preparation programs. Yet, the graduates of these programs serve the profit-making interest of the private sector by becoming employed in business and industry, thereby enabling individual firms to realize a profit through the production of goods and the delivery of services. The question is often raised as to whether firms in the private sector should bear the cost of training since they utilize the proficiencies their employees attain in the public vocational education system. Should vocational education be viewed as part of the educational responsibility of the public? Or should it be viewed as a public subsidy of the private sector in developing competent human resources? The unresolved nature of this issue, creates an atmosphere of enmity that often results in the presence of "hidden agendas" and the exercise of tenuous committments.

The nature of the argument suggests that the issue can be resolved by having industry subsidize public vocational education programs. But, because of current sentiment about the ineffectiveness of vocational education, it is more likely that industrial enterprises will choose to establish their own training programs—either individually or collectively.

We must remember that the private sector already invests a considerable amount of money in training. Hence, the question of whether policymakers should support the profit-making motives of industry must be followed by the question of whether the nation can afford to keep two separate systems of training (Worthington 1981; Wise 1981). Furthermore, if industries are pushed in the direction of being responsible for their own training it may have disastrous implications for the placement potential of public vocational education programs.

As Cross (1981), clearly indicates, a choice is to be made between competition, cooperation, or parallelism. If there must be wholehearted commitment to any vocational-education/private-sector cooperation policy, then these issues must be resolved to relieve some of the tension that undermines the effectiveness of cooperative relationships.

Summary

The concept of cooperation is simple and appealing, but the practice of cooperation is complex. This complexity is especially evident in the cooperative practices between vocational education and the private sector. The variety of cooperative arrangements, and the problems and issues that engender tension between current and potential cooperating entities do provide evidence of the presence of deficient conditions, and hence provide support for the initiation of policy in this area.

CHAPTER 3

CONSIDERATIONS FOR POLICY DELIBERATIONS

Our familarity with the problems and issues related to vocational-education/private-sector (VEPS) cooperation must be converted into the requisite policies that will strengthen cooperative practices. To do so will require consideration of the following factors:

- The determination of the specific policy objective to be pursued
- The development of a theoretical understanding of the field of practice in terms of both the existing legal framework within which policies will be implemented, and the alternative explanations for the circumstances that create deficient conditions
- The assessment of the policy arena to identify participating interest groups and to note their potential influence on prospective policies

Each of these will be addressed in the following subsections. The first subsection will briefly discuss the policy objective to be pursued; the second subsection will address in a tabular format the existing legal framework within which policies will be implemented; the third subsection will discuss the factors that affect cooperative practices to lay a foundation for establishing guidelines for policy implementation; and the fourth subsection will again use a tabular format to assess the policy arena.

Specifying a Policy Objective

To become involved in policy development without a preconceived policy objective will only amount to blindly grasping for solutions to resolve existing problems. This usually results in improper policy prescriptions that waste valuable federal resources and create a flurry of discontent. In light of current conditions, vocational education can ill afford such consequences. Therefore, it is essential that a specific position be taken and that specific objectives be formulated for the consideration of policy. The position taken or the policy objectives to be pursued will reflect federal perspectives on what should be the ideal form of VEPS cooperation. Naturally, then, these perspectives will determine the acceptability of various suggested policy alternatives.

Federal policymakers can choose from among a variety of policy objectives. For instance, one policy objective can focus on securing the maximum amount of support from the private sector for vocational education, thus letting the private sector underwrite vocational preparation. Another objective may be the development of a coherent structure of VEPS collaboration that results in an interweaving of education and work, allowing for mutual responsibilty, commitment, and accountability. This may be directed at preventing the fragmented, uncoordinated, duplicative and ad hoc interaction that Clark (1982a, 1983c) so deftly speaks about. Yet, other policy objectives may include enhancing cooperation by using the context of production (i.e., industry and business

facilities) as the base for vocational preparation. Then, if all the above prove to be unfeasible, policymakers can resort to improving coordinative ties through the creation of new collaborative structures. In the latter, the locus of authority lies neither in the educational nor industrial camps, but is so arranged that it elicits the best of what both can offer. As may be noted from these options, they are not mutually exclusive, and each has inherent positive and negative features. However, each points to a specific direction in the formulation of policy.

What factors should be considered in making so critical a decision as taking a specific policy position? Among the factors to be considered are—

- the collaborative structures that would be in the best interest of vocational education, given present trends and future possibilities for vocational preparation,
- the collaborative structures that would be in the best interest of the clients served by vocational education—both students and employers,
- the probability of support by key interest groups,
- the probability of successful implementation by participating agencies.

Such choices are extremely difficult to carry out, not only because of the discontent that can ensue, but because of the consequences of judgmental error. However, if hints from the literature about what should be an appropriate course of action are followed, the chosen policy objective will certainly point toward streamlining cooperative efforts and creating a unifying structure between education and work. This sentiment is borne out by Clark's (1982a) expression of discontent over the fragmented nature of industry-education cooperation, and by his suggestion of the need to wire the systems of education and work together (Clark 1983b, p. 51). In addition, this view is generally supported by Wise (1981), who speaks of bringing nascent cooperation into full educational maturity; by Aslanian and Brickell (1981), who speak of the need for eliminating the company-college distinction; and by Barton (1981), who speaks of a fuller integration of education and work, which can possibly be accomplished through the involvement of employers and unions in the actual governance of vocational education.

Hence, in keeping with the first two of the selection factors enumerated above, the policy objective to be chosen will veer toward some form of restructuring of VEPS cooperation. But the third factor will serve as the source of control for any unrestrained inclinations to create new structures. Despite the difficulty experienced in making such choices, a policy objective must be determined before specific policy alternatives are selected. The importance of having a policy objective before choosing specific policy alternatives lies in the value of predetermined purposes for evaluating the worthiness of currently available options.

The Legal Framework for Implementing Policies for Vocational-Education/Private-Sector Cooperation

While a policy objective is used as a means of evaluating policy options based on a predetermined goal, consideration of the legal framework helps in evaluating these options based on the feasibility of implementation. Policies are not implemented in a vacuum. Newly implemented policies must fit within the framework of existing policies; and existing policies may be supportive, duplicative, or impeding. Prior assessment must be made to determine possibilities for successfully integrating new policies within the existing legal framework.

Table 1 examines other relevant policies that may be affected with the introduction of new policies in VEPS cooperation. The eight areas of policy noted here are only suggestive of the breadth of existing legislation that may be considered. Each of these eight policies are evaluated based on (a) the policy options they will affect and (b) the specific effect each may have on selected policy options. Because of limitations of space, this analysis does not provide sufficient detail for making any conclusive decisions. Rather, it provides a framework for thinking about the impact of suggested policies on existing legislation. It is expected that other relevant policies will be identified. It is also expected that more specificity will be given to the policy areas mentioned and the policy effects noted.

Policy options and policy alternatives are detailed in the next major section of the paper.

Factors Affecting Cooperative Arrangements Between Vocational Education and the Private Sector

One common oversight in developing policies to enhance interagency cooperation is the notion that coordination occurs automatically—that if some mechanism is set up to foster coordination, then coordination will naturally result. But this is hardly ever the case. The mixed results from coordination mandates in vocational education and other legislation provide verification. Past experience teaches that policy initiatives to enhance VEPS cooperation must be conceived in a manner that takes into account the inherent complexities of the business world and the inherent difficulties of attempting to foster harmony among two organizational entities that are each peculiar and historically different.

In light of the complexity of these cooperative arrangements, this section of the paper seeks to highlight the factors that prevent the development of strong ties between organizational entities. The purpose of this examination is twofold. First, it is intended to provide guidance in the selection of policies; and second, it is intended to suggest alternative considerations for designing measures for implementation and evaluation.

The following subsections will address ten factors that are essential to successful cooperation between organizations. They are as follows:

1. Items to exchange
2. Mutuality of benefit
3. Similarity or complementarity of attributes (goals, values, ideologies, structures, perceptions)
4. Mutuality of respect, confidence, and trust
5. Interorganizational awareness
6. Communication
7. Commitment
8. Receptivity to change

TABLE 1

VOCATIONAL-EDUCATION/PRIVATE SECTOR (VEPS) COOPERATION AN ANALYSIS OF RELEVANT OTHER POLICIES

Relevant Other Policies	Policy Options Affected	Effect on Possible Policy Options to Enhance VEPS Cooperative Activites
1. Vocational education legislation requiring general advisory councils, and policies in local institutions requiring craft advisory councils for each vocational program	All policies will be affected since the advisory structure is currently used as the primary link between vocational education and the private sector.	To avoid prarallel structures, the role of advisory councils may have to be redefined, the current structures of advisory councils will have to be modified, or the advisory structure as we know it may have to be completely eliminated.
2. Job Training Partnership Act, which requires the heavy involvement of industry in training activities	All policies will be affected since the Job Training Partnership Act already elicits the participation of local employers through PICS. There is a finite number of employers.	Employers may have to choose which arm of training they should become involved with. Among the possible consequences are: duplication, overburdening of employers, and competition among local agencies.
3. Current corporate tax policies (federal and state)	Policies which propose the use of tax incentives to elicit industry participation, or policies which suggest additional taxation from industry or more training responsibility allocated to them.	Incentives will only be encouraging, given nature of current corporate tax policies. Incentives may well end up not being attractive to prospective participants
4. State and federal laws on employer liabilities for accidents at the workplace	Policies requiring federal insurance programs so that the prospect of liability for accidents does not deter employer participation	Relieves some of the tension that discourages participation. Laws must be known so that effective and workable measures can be set up.

TABLE 1 (continued)

Relevant Other Policies	Policy Options Affected	Effect on Possible Policy Options to Enhance VEPS Cooperative Activites
5. Legislation on fair labor standards and practices	All policies requiring the use of students in the production of goods or delivering of services.	Has implications for evaluating the cost to the employer or the public agencies, and for determining how specific policies can be implemented.
6. Union policies for the workplace	All policies requiring the use of students in the actual production of goods and delivering of services.	Union policies may not be consistent with the training objectives set further by some policies. The use of students as workers can undermine the security of employees who are represented by the union. It may also conflict with existing apprenticeship arrangements.
7. State legislation for industry services	All policies requring the intensive participation of cooperating industries.	Possibility of duplication.
8. Feceral legislation on contracting with private and governmental institutions	Policies suggesting the federal use of industries as contractors to provide training services.	Currently existing contractual restrictions may undermine the success of such policies where implemented (e.g., paperwork, time span between submitting bids and being allocated a contract, reporting requirements may not be attractive to industries).

9. Preconception of implementation considerations

10. Leadership initiative

Factor 1: Items to Exchange

A fundamental condition for establishing interorganizational relations is a basis for exchange. Each participant in a coordinative relationship must possess something that can be contributed to the relationship (Kochan 1975); each must possess some item to exchange. To the extent that there are no exchangeable items between cooperating entities, the basis for cooperation will be unclear, and the success of cooperative ventures will be uncertain. There must be items to exchange for successful coordination to result.

Thus, with VEPS cooperation, it is assumed that each side has exchangeable items to contribute to a cooperative relationship. And this is indeed the case. On the one hand vocational education can generally provide a well-trained work force; and on the other, the private sector can donate the financial, physical and human resources to make that training possible. But if viewed from a microscopic perspective, the question of exhangeable items can arise each and every time a proposal is made to develop a cooperative relationship between a specific vocational institution and a specific type of industry. The key question then becomes whether that specific relationship is being established because exchangeable items are present, or whether the organizations are establishing such ties because of the good that is somehow inherent in coordination.

If ties are established for the latter reason, then successful coordination is doubtful. As Wilson (1981) notes in commenting on cooperation between education and the private sector. "Efforts to develop relationships between different groups fail if their basis is only that such relationships are good" (p. 11).

Policymakers can correctly assume that there is a basis for exchange between vocational education and the private sector. This assumption is borne out by the literature, by experience, and by the history of VEPS relationships. However, it is incorrect for policymakers to assume that any or all industries have items to exchange with any or all vocational institutions. Policies must be developed that take into account these differences in organizational needs and output.

Factor 2: Mutuality of Benefit

The presence of exchangeable items assures that each participant in the relationship has something to benefit from coordination. But relations are strengthened only when each side perceives mutual benefit or gains from interacting (Levine and White 1960; Evans 1966). This mutuality of benefit is perhaps the oldest and most common principle of interorganizational relations. The exchange must be a mutually balanced one, and the items exchanged must be sufficiently valuable to the participating organizations. What an organization gives or receives must be considered valuable enough to warrant entry into the relationship.

In VEPS cooperation, the vocational institution, the employer, and even the student, all benefit from a coordinative realtionship (Bathnay 1980). The industry benefits from high profitability because of a skilled work force, the student gets better training and job opportunities and the school can maintain higher standards. Thus, the needs of all participating organizations are met. As Warmbrod (1982) notes, there must be recognition of mutual needs; and to warrant the time,

effort, and resources required for collaboration, needs and benefits must be clearly perceived by all participating organizations. If mutual recognition of mutual needs is the precursor to mutuality of benefit, then VEPS cooperation has a firm foundation for establishing cooperative arrangements.

But such an approach seems somewhat selfish, and it is—especially so in coordination between industry and education. Hensley (1978), admitted the strong self-orientation in such relationships when he noted that there must be a recognition "that individuals and institutions often initiate actions because of their own interest." Whatever the circumstances, he states, "All interests must be served" (p. 27). When all interests are served, the relationship, however structured, is likely to continue as long as it seems mutually beneficial (Wilson 1981). Hence, participation in a cooperative arrangement is based on the likelihood that each participant has something to gain and continues to realize such gains. Hoyt (1982), puts this concept into practice when he states that a basic principle of industry-education cooperation is always to make sure that the "what's in it for me" question is answered. Here, Hoyt, as did many other authors (Shive and Rogus 1979; Wilson 1981), highlighted the importance of examining the mutuality of benefits before engaging in a cooperative arrangement.

If there is such a strong propensity to pursue organizational interest in establishing cooperative ties, then several questions can be raised. Are benefits truly mutual in industry/vocational education cooperation? Is there a balance in the intensity of need? If benefits are not equally valuable, then they are not truly mutual. If there is not a balance in need intensity, then the organization with the most intense need will run the risk of becoming overly dependent. These complex issues give rise to uncertainty as to whose interest is being best served by VEPS cooperation.

Policymakers should carefully consider the mutuality or symmetry of benefit in any mandated cooperative arrangement. Naturally, each oganization will examine policy mandates to ascertain the potential for gain. If the anticipated benefit is not sufficiently valuable, then there will be an unwillingness to participate. Even beyond this, policy mandates can be counter-productive to the extent that they encourage situations where there is a great inbalance in benefit. If vocational education becomes the prime beneficiary in the relationship and is made too dependent on industry for delivering training services, then educational autonomy can be lost and the vocational education sector may become too subjected to industrial influence. An indepth analysis of benefits must be made when policies are seriously being considered.

Factor 3: Similarity or Complementarity of Attributes

When organizations have similar goals and philosophies, then the climate for coordination between them becomes more favorable (Evans 1966; Miller 1958; Johns and DeMarche 1951). This is consistent with the research on interorganizational theory which confirms the fact that compatibility and congruence are elemental concepts in interorganizational relations. As might be expected, similarity of attributes makes it easier to understand and communicate with each other.

But Evans (1966) also speaks of the concept of complementarity of attributes. The objectives of one organization, although not similar to that of another, may well contribute to the ability of that other organization to accomplish its goals. Here, organizations can establish a mutually supportive relationship.

Coordination between vocational education and the private sector must be examined on both the dimensions of similarity and complementarity. The end purposes of vocational education and

industry are certainly not similar. The former is concerned with the preparation of competent individuals, while the latter is concerned with the production of goods and delivery of services for a profit. But these goals are complementary since the individuals that are prepared by the vocational education system are utilized by industry to produce goods and deliver services. The complementary nature of goals make any relationship between these organizations mutually supportive.

But by examining those dimensions in which similarities are present, it is possible to assess compatibility for fostering a coordinative relationship. If similar values, ideologies, perceptions, and structures exist on both sides, then the climate for cooperation can be favorable. But do these similarities generally exist? Available evidence bears out the fact that differences on these dimensions are numerous. Bowen, (1981) questions the compatibility of business and industry with their educational counterparts. She notes, among other differences, that business people do not clearly understand the distinct pattern of campus decision making. Clark and Rinehart (1982), cite the differences between the budget cycles of business and industry and the educational system; Reap and Brown (1976) note that there is a low correlation between perceptions of business people and educators with regard to abilities required on the job; and other authors have cited numerous dissimilarities between the private sector and vocational education.

Dissimilarities create tension and tension is inimical to the success of coordinative relationships. In spite of the similarity and complementarity that exist between these entities (Honicky 1979), certain traditional differences can plague the participants in a cooperative venture. These differences do not make the establishment of successful relationships impossible. However, the differences that exist must be recognized and accommodated in designing cooperative arrangements.

This information is essential for formulating policy. It is so appealing to dwell on the positive aspects of VEPS cooperation, that the similarities and complementarity, may be over emphasized—to the total neglect of the differences that exist. Neglecting these differences can prove to be a fatal oversight in formulating policy. Some coordinative structures are impossible to implement successfully because of the tension that is generated by inherent differences. Such differences must be recognized by both policymakers and policy implementators, and measures must be taken to overcome them.

Factor 4: Mutuality of Respect, Confidence, and Trust

Successful coordination cannot result without the presence of mutual respect, confidence, and trust between coordinating parties. Here, too, the absence of these qualities can create enough tension to make coordinative arrangements ineffective. This is clearly noted by Paul (1981) when he states that—

> Mutual respect and trust is important to any relationship. But it is even more important to linkages between education and industry. Only when the industry is convinced that the education system is willing and capable of delivering training programs suited to their (industry) needs, will they go the extra mile to help schools with their facilities, equipment, and personnel. (p. 33)

Even Shive and Rogus (1979) observed that "qualitative school-business partnerships grow over time, with the development of mutual trust" (p. 290).

A careful examination of the status of coordination between vocational education and the private sector, however, reveals much to be desired in the area of mutual respect, confidence, and trust. Jasso (1983) cites mistrust as the first serious problem that arises when representatives from business and education get together to explore possible collaborative efforts. Johnston (1979) goes as far as referring to the condition as a state of cold war between the business sector and education, noting that such a state exists because of the mistrust that exists on both sides. One of NAIEC's publications (NAIEC n.d.) commented on the perception of some business people that the only assistance educators need from them is dollars. This viewpoint is supported by Wilson (1981) who warns that private initiative means more than private money. Such comments infer that the vocational education community is primarily interested in the resources they can receive from industry; they also reflect the suspicion on the part of the business community that this is the case. Such situations do not refelect mutual trust.

But some of these feelings of hesitancy originate beyond the immediate realm of the cooperating parties. Ripley and Franklin (1983) state in very clear terms that some businesses do not want to become involved with public training programs because of a profound mistrust and dislike of government programs and regulations in general.

Policymakers must be forewarned of these circumstances. In a climate of uncertain trust, efforts should be made to restore mutual confidence before engaging in any massive efforts at restructuring cooperative mechanisms. Policies must be developed in such a manner as to allow members of the private sector an opportunity to overcome their fears and misgivings. Policymakers may want to consider an incremental policy measure, where the bond of the cooperative arrangement is achieved in a series of steps over a prespecified time period.

Factor 5: Interorganizational Awareness

Awareness is a prerequisite for establishing coordinative ties (Esterline 1976). Awareness refers to the degree to which organizations or units within these organizations are familar with the services, goals, or selected characteristics of other organizations and units, or more specifically, the extent to which each agency is knowledgeable of the potential of other organizations to support its activities (Litwak and Hylton 1962). One cannot truly evaluate the potential for coordination without being aware of essential characteristics of the other organization. Even more, nurturing a relationship with the other organization is difficult if one is not sufficiently aware of its organizational characteristics.

The importance of this factor is well known in VEPS cooperation. Relic (1979) emphasizes that the potential for cooperation among all the key actors in industry-education cooperation must be based on "awareness of one another's role" (p. 1); Wilson (1981) suggests that increased communication will contribute to a growing understanding and appreciation of each other; and Banathy and Duwe (1978), in delineating procedures for establishing linkage, notes several steps through which educators will develop an awareness of industry.

Whether or not these precautions are generally observed is still unclear. Honiky (1979) notes that "ineffective communication between the educational and business communities has resulted in misunderstanding myths, and stereotypes" (p. 41). This lack of awareness results because the tendency of organizations is to assume that they have full knowledge of the other. Usually they do not—either because of overconfidence or lack of interest. Resnick (1980) points out that, generally, educators have little exposure to industry and therefore have a minimal awareness of the industrial world. Although this will not be true of vocational instructors, the need for familarity with

the industrial world is clearly noted. However, whether vocational instructors maintain this familiarity is debatable. If there is truth to Hensley's (1978) claim that educators are reluctant to leave the classroom to observe industrial procedures, then there is more substance to the argument for encouraging educators to become aware of the characteristics of industry. The state of awareness by educators should be of concern to policymakers. It seems futile to encourage cooperative practices when participants in such relationships do not fully understand the context of their counterpart's activities. Consideration should be given to some educational program as a prerequisite for establishing cooperative ties. The program should focus on the attainment of interorganizational awareness.

Factor 6: Communication

Communication is another essential factor in interorganizational relations. Ease of communication between and within agencies can make the difference between a marginal coordinative arrangement and one that is effective in accomplishing its purposes. If two different organizational entities are required to function together in accomplishing a common goal, there must be some cohesiveness among parts of both organizations so as to reach that goal. In the absence of a subunit comprised of the relevant factors from both organizations, lines of communication must be instituted to create the interorganizational bond. As pointed out in the previous subsection, this bond fosters interorganizational awareness that nurtures effective cooperative ties.

The importance of effective communication in VEPS cooperation is highlighted by Warmbrod (1982). After visiting a variety of exemplary industrial-education cooperation programs across the country, she notes the factors accounting for the success of these programs and presents some general guidelines for educational institutions desiring to establish cooperative ties with industry. First among her list of guidelines was that there should be "good, clear communication between key persons in industry and education" (p. 14). Several other authors echo the same advise (Honiky 1979; Watson 1982). Watson (1982) goes a bit further to note that educators should learn the language of industry so that they can communicate with industrial personnel.

But effective communication is not easy to realize. In the very first sentences of the handbook of industry-education councils (NAIEC n.d.), the author points to this problem in stating "Education and Industry do not know each other well enough." In fact, he states, "there is a wide communication gap" (p. 1). Honiky (1979) supports this statement, observing that we are in the midst of a considerable dilemma—that of ineffective communication between industry and education. In formulating policies to enhance VEPS cooperations, policymakers should ensure that whatever policies are instituted, free and easy communication will be allowed. Although coordination cannot be mandated, policymakers may want to require activities, or the institution of measures, that will encourage communication.

Factor 7: Commitment

Mutual commitment between organizations is one of the most essential ingredients in the success of cooperative ties. Though organizations may have the incentive to cooperate because of the perceived benefits to be attained from a cooperative relationship, without mutual commitment to the cooperative venture the relationship may function at a mediocre level, and may eventually whither and die. Commitment is the energizing force that gives life to mandates, contracts, plans, and other formal instruments designed to foster coordination.

Clark (1982b) observed that the act of bringing together the local leadership in industry and education takes commitment on the part of both sectors. The intensity of effort required also speaks to the importance of commitment (Clark and Rinehart 1982). Warmbrod (1982) also hints at the importance of commitment as she discusses general guidelines for establishing industry-education cooperation. But commitment depends on a variety of factors including the persons involved, the nature of the benefit to be derived, and the existing organizational and social climate.

The present nature of cooperative relations between education and industry does not allow the private sector to develop any strong degree of commitment to educational activities. Hensley (1978) notes that industry remains unconvinced that educational linkages are important. Voluntary participation does not necessarily secure commitment. Commitment cannot be mandated, therefore, policymakers should investigate alternative structures that will demand a higher level of commitment on the part of industry.

Factor 8: Receptivity to Change

Involvement in any form of interorganizational relationship requires some degree of change on the part of each participating organization. Each organization has to accommodate the needs of the other. This accommodation sometimes requires major intraorganizational adjustments. Additional responsibilities may have to be assigned; priorities may have to change so that resources can be reallocated; and sometimes, even organizational structures and established procedures may have to change. If participating organizations are not receptive to the changes that are required, resistant behavior will result. This resistance severely undermines coordination. But the problem may not only be resistance as structures may be so rigid that adjustments cannot be made to respond to demands imposed by coordination.

Watson, (1969) in his analysis of resistance to change in social systems, notes three primary reasons for resistance: the protection of vested interest; protection of what is considered sacred; and rejection of "outsiders." These tend to explain the inflexibility of both industry and vocational education in VEPS cooperative activities.

Yet, concensus exists that change is inherent in VEPS cooperation. Paul (1981) notes that flexibility is an important characteristic to successful industry-education relations, for without flexibility maintaining an effective training service would be impossible. Banathy and Duwe (1978) stress the importance of adaptability, and Warmbrod (1982) observes that institutional flexibility is required to meet the needs of industry.

But the flexibility required does not characterize the current institutional structures or inclinations that exist for VEPS cooperation. In commenting on the status of industry-education cooperation, Cohen and West (1978) state that there is "the age old phenomenon of resistance to change, of self-protective clinging to the status quo, of maintenance of vested interest" (p. 17). Hensley (1978) also illustrates this resistance with the following statement: "In some ways there is the expressed idea that "our way" is the right way and "their way" is the wrong way. In short, there is a significant resistance to institutional change" (p. 30).

Productive VEPS cooperation cannot materialize when institutions are unwilling to modify institutional structures to accommodate the demands of a cooperative relationship. Since resistance is not easily overcome, policymakers must be aware of this phenomenon as a potential impediment to realizing the true benefits of cooperation. Here again, policy mandates incremental in nature may ease the shock of drastic change and woo participants to make the necessary adjustments.

Factor 9: Preconception of Implementation Considerations

Before a coordinative relationship becomes functional, some preconsideration must be given to every facet of implementation. So often institutions establish coordinative ties without considering the details of how the coordination function will be accomplished. This neglect usually proves to be harmful when coordination is operational. While some problems can be overcome at that time, many of them are difficult to handle and culminate in the disruption of the relationship.

Many professionals who are involved in VEPS cooperation suggest various factors to be considered before engaging in cooperative arrangements. Hoyt (1982) notes two key principles:

1. Ensure that both industry and education agree on the expected student benefits to be derived from working together. (p. 1)

2. Ensure that what you propose industry and education persons do together can work. (p. 3)

Warmbrod (1982), in her specification or guidelines that were abstracted from exemplary programs, notes other factors.

1. Careful and thorough planning of each cooperative effort

2. A clearly written agreement or contract to help achieve successful completion of the joint endeavor.

3. Arrangement for ongoing evaluations. (p. 14)

Wilson (1981) advises the education sector to ensure the need targeted is addressable through cooperative action. All these point to the necessity of careful examination before engaging in a cooperative venture. They highlight the importance of preplanning.

These suggestions have implications for policy implementations. In the formulation of policy, consideration should be given to the development of coordination plans. This activity will encourage coordinating entities to carefully examine the procedures for interacting.

Factor 10: Leadership Initiative

In any form of interorganizational coordination, the impetus must come from somewhere to maintain the momentum of the relationship. Coordination will go nowhere if someone is not willing to take the leadership initiative. In VEPS cooperation, this is almost a universal principle. Paul and Carlos (1980) note that the need for strong dedicated leadership is essential for developing effective linkages between industry and vocational education. Wilson (1981) also notes the importance of leadership. He suggests that someone in education or the private sector must reach out to the other, or there can be no evolving relationship. Similar sentiments were experienced by Hensley (1978), Ripley and Franklin (1983), and Hoyt (1983).

But both Ripley and Franklin, and Hoyt suggest that vocational education should provide the leadership. Hoyt states that:

> Vocational education must provide the leadership if you want closer cooperation between business and industry. You—as a vocational technical educator—will have to make the first move. Increasingly, we are operating in a buyer's market, yet we are the seller. (p. 75)

In a similar vein Ripley and Franklin (1983) notes,

> There must be some initiative taken by someone in order that there could be a situation in which there could be substantial and meaningful private sector involvement in public employment and training programs. Most likely it is business that will have to be wooed and some other actors—public in many cases—that will need to take the initiative. (p. 701)

These have policy implications for determining where the locus of responsibility will lie for VEPS cooperation. The literature seems to suggest that industry is not motivated to provide the leadership. Either measures will have to be developed to peak their interest, or the locus of responsibility will have to continue to reside with vocational education.

The Policy Arena for Vocational-Education/Private-Sector (VEPS) Cooperation

There are many organizations with vested interest in the training enterprise. Any policy affecting the current means of delivering training to the public will be closely examined by these organizations. The object of their examination will be to determine whether or not new policy initiatives will in some way affect their organizations' scope of responsibility. It is for this purpose that the following table tries to make a preliminary analysis of the inclinations of key organizations. Sixteen key organizations are indentified and a sketch of potentially pertinent information on each of these is provided in table 2.

Information on these factors was secured through contact with representatives from each of these agencies. While the information included here may not be complete enough for use by the policymaker, it does provide a sense as to the variety of concerns that can be brought to bear on policy initiatives to strengthen VEPS cooperation. In addition the information provides a preliminary structure for assessing the posture and influence of key stakeholders in the training policy arena.

Summary

Issues of policy relevance and policy feasibility (both in terms of enactment and implementation) are major concerns in the development of policy. The topics discussed in this chapter should shed some light on these issues as they relate to VEPS cooperation. There must be a policy objective; consideration must be given to the legal framework within which a policy will be implemented; underlying factors of previous successes and failures in cooperative ventures must be considered; and the concerns and influence of participants in the policy arena must be assessed. Without these considerations, the policymaker will be unprepared for the challenges of the policy development process and the complexities of the field for implementation.

TABLE 2

VOCATIONAL EDUCATION/PRIVATE-SECTOR (VEPS) COOPERATION EVALUATION OF GROUPS IN THE POLICY ARENA

Group	Membership and Size	Type of Constituents	Level of Concern about VEPS Cooperation	Possible Issues and Areas of Concern about VEPS Cooperation
1. Council of Chief State School Officers	56 chief state officers representing each state and 6 trust territories.	State education agencies. Education policy makers.	Not an issue with the council, but is state specific, and level of concern varies from state to state.	Varies from state to state. Generally concerned with adequate preparation of students for employment.
2. National Association of State Boards	700 members.	State boards of education.	VEPS cooperation is among the top 2 issues with which they are concerned.	• Concerned with transition from school to work. • Concerned with the nature of responsibilities assumed by each sector. • Interagency agreements.
3. Education Commission of the States	Representatives of 48 states; Puerto Rico, Virgin Islands, American Samoa, or 357 members.	Governors, legislative leaders, chief state school officers. State higher education, executive office, State education boards.	No information received.	No information received.
4. National Association of Manufacturers	14,000 companies. 80% of the companies employ fewer than 100 persons. 14 policy committees.	Manufacturers, personnel concerned with fiscal policy, international trade, taxation, regulations, human resources.	Committees do not focus specifically on education but strongly concerned about job training. Membership broadly involved, but involvement mostly company specific.	• Strongly encourage vocational education to be sensitive to industry needs. • Feels there should be a closer analysis of the job market and training. • Concerned about the level of academic achievement in public schools and whether we will have the labor force to meet changing technological needs. • Generally concerned about policy supporting local control of schools.

The information contained in this table was secured through a telephone interview with representatives from the specific organizations. It should be noted that the respondents from these organizations were not notified about the questionnaire before the interview, and consequently they were responding on-the-spot.

TABLE 2 (continued)

Group	Membership and Size	Type of Constituents	Level of Concern about VEPS Cooperation	Possible Issues and Areas of Concern about VEPS Cooperation
5. National Alliance of Business	Approximate representation: 50 colleges, over 1,000 companies over 11,000 volunteers.	Private industries, black colleges, private industry council, government personnel, public interest groups.	High level of concern currently raising funds to continue program on industry-education cooperation.	• Encourage industry to seek partnerships with schools, i.e., adopting a school, allowing students to spend time in businesses to get a feel for the workplace. • Getting individuals who are successful in their careers to go into schools and acquaint students with work places. • Concerned about linkage between the job market and training needs—performance accountability.
6. National Federation of Independent Business	Over 500,000 members.	Independent businesses.	No information received.	No information received.
7. American Association of Training and Development	22,000 members.	Types of groups represented include: corporations, government institutions and education institutions.	No information received.	No information received.
8. AFL-CIO	14,000,000 members. 96 international unions.	Unions.	Level of concern varies from union to union. Some unions are concerned about and involved in VEPS cooperation.	• To increase the pool of available workers. • Interest in educational competence for employment. • Broadly concerned about industrial bonding and taxation.
9. Chamber of Commerce of the United States	200,000 members.	80% of the businesses in the United States.	Believes it to be quite essential. Highly concerned.	• Increased cooperation between vocational education and business. • Lack of adequate input by business on educational policy. • Inadequate labor market information on part of vocational education. • Incompatibility of what is offered in vocational education with what is needed in the work world.

TABLE 2 (continued)

Group	Membership and Size	Type of Constituents	Level of Concern about VEPS Cooperation	Possible Issues and Areas of Concern about VEPS Cooperation
10. American Council on Education	1,620 members and affiliates.	Institutions, colleges, universities, higher education; affiliates and associations.	Very high interest.	• Needs of vocational education far outstrip resources in education to meet them. • Lack of an adequately trained teaching cadre in vocational education to educate the types of students needed in the work force.
11. National Advisory Council on Vocational Education	21 Council members.	Advise president, Congress, secretary of education; National commission on employment policy.	Very concerned for vocational education-industry partnership.	• Lot of rhetoric; not enough solid working relationships. • Interactor between vocational education. Industry not extensive enough. • Example: there is inadequate communication about program standards and curriculum content.
12. American Vocational Association	50,000 members.	Administrators, superintendents, teachers (anyone interested in vocational education)	Very concerned.	• Legitimate private sector involvement in program planning and evaluation. • Concerned that vocational education gets gets its share of funds from private sector. • Concerned with how collaborative types of patterns are developed, e.g., communication, use of resources.
13. Association for Independent Colleges and Schools.	580 Schools. 450 Students.	Institution organized to train students. Private independent schools.	It is a primary concern of the organization.	• Concerned with educating students for employment needs: concerned with sharing in public funds.

TABLE 2 (continued)

Group	Membership and Size	Type of Constituents	Level of Concern about VEPS Cooperation	Possible Issues and Areas of Concern about VEPS Cooperation
14. National Association for Industry-Education Cooperation	900 members.	Leaders or persons in decision making positions in business, education, labor, and government.	Very high. The mission of the organization is to improve partnership between vocational education and private sector.	Refocus vocational education to be more responsive to student and employer needs. More direct vocational education private sector cooperative planning, goal setting, and needs assessment. Redesign of educational curriculum. Updating instructional materials and equipment in vocational education.
15. United States Apprenticeship Association	270 staff members. 300,000 employees. 50,000 employers.	Over 300,000 recognized apprentices. About 50,000 employers representing a vareity of businesses and trades.	Very high concern. Involved with vocational education at state and local level to encourage sharing.	• Turf issue—substantive concern is whether vocational education or private sector can best prepare students for work. • Students graduating from vocational education without adequate knowledge about the trade for which they have been trained.
16. National Association of Private Industry Councils	80 members.	Members of private industry councils. Professional administration of employment firms.	This concern is considered to be among the top five priorities.	• Improved communication between vocational education and business. • To ensure better coordination between job training sectors and vocational education. • Utilization of vocational education as a training source for employing agencies.

CHAPTER 4

A COMPENDIUM OF POLICY ALTERNATIVES

Policies cannot be formulated without understanding the context that generates the need for policy; nor can policies be formulated without due consideration given to the environment in which those policies will be utilized. The concern for context was addressed in Chapter 2 of this paper and the considerations for policy deliberation were addressed in Chapter 3. This chapter identifies and examines four broad-based policy areas, suggests a variety of policy options and provides a detailed analysis of twelve specific policies.

Policy Options: A Framework for Understanding Policy Alternatives

A policy is a course of action. The course of action an agency chooses to pursue is usually contingent on a variety of internal considerations. Most important among these considerations are—

- the level of involvement the agency is willing to have in influencing the field or addressing the problem situation;
- the degree of restructuring or change the agency is willing to assume responsibility for; and
- the level of investment the agency is willing to make in influencing the field.

But all these are related—the greater the degree of restructuring, the higher the investment and involvement required.

To accommodate these considerations, four broad-based policy areas are suggested to allow the agency maximum flexibility in pursuing alternatives. These areas form the basis of the framework for identifying policy alternatives. Four option areas are noted that imply four distinctly different roles for the federal government. The four areas (and roles) are (1) a posture of involvement without direct fiscal intervention (assuming the role of catalyst), (2) fiscal support for knowledge generation and information dissemination (role as knowledge generator), (3) fiscal support to encourage and strengthen current activities (role as supporter), and (4) fiscal incentives and support to create new structures (role as innovator/leader). Each of these has a different intent, a different justification, and is based on different assumptions; and each has unique advantages and disadvantages. Further, each of these roles will warrant a different set of policy alternatives. In the following pages, the four policy areas are presented, each including a description of the policy, brief presentation of the intent, justification, explanation of assumptions, and advantages and disadvantages of the policy.

POLICY AREA 1: FISCAL NONINTERVENTION

DESCRIPTION:

The federal government would assume a role as a catalyst. Although no funds would be provided to localities for any form of cooperative activity, measures would be implemented to maintain an awareness of the importance of vocational-education/private-sector (VEPS) cooperation. Measures here would vary from facilitative activities to the provision of nonfiscal stimuli.

INTENT:

To allow natural forces to provide the appropriate vocational-education/private-sector cooperative equilibrium. Employ nonfiscal measures to facilitate the natural growth and development of cooperative ties.

JUSTIFICATION:

1. Too costly to make a cost-beneficial or cost-efficient contribution
2. The importance of local fiscal initiative in securing commitment to policy direction
3. Local autonomy/new federalism
4. Sentiment among locals for federal nonintervention

ASSUMPTION:

Under present circumstances, fiscal involvement of the federal government would not make a significant difference. The inertia of local interest would accomplish the development of effective cooperative ties.

ADVANTAGES:

1. No direct cost to government
2. No responsibility for embarking on a wrong course

DISADVANTAGES:

1. Limited ability to exert control over the course of vocational-education/private-sector cooperation.
2. Perception by vocational education community of federal negligence in the area.
3. Accusations of partiality to other forms of training where there would be fiscal support for such activities.

POLICY AREA 2: KNOWLEDGE GENERATION

DESCRIPTION:

Provide fiscal support for the generation of knowledge and the dissemination of information pertaining to private sector involvement with the vocational education community. Research funds would be provided to investigate specific topics that would contribute to VEPS cooperation.

INTENT:

To secure information for understanding aspects of VEPS cooperation that would not be clear to policymakers and practitioners.

JUSTIFICATION:

Pursuing courses of action without understanding the intricacies of VEPS cooperation could be counterproductive. Directing policy at specific problems without noting the true nature of such problems would be unwise.

ASSUMPTION:

There are aspects of VEPS cooperation that we do not quite understand, and understanding these would be critical before significant investment should be made in this area. The success of future policy depends on factors that are not yet understood.

ADVANTAGES:

1. A base of data to support future action
2. More security in initiating action (especially if drastic)
3. Advancing knowledge in the area

DISADVANTAGES:

1. Delay in time (especially if there is an urgency for policy).
2. Open to accusations of "footdragging."
3. Questionable as to whether the results of studies would (or could) be utilized.

POLICY AREA 3: MAINTENANCE OF STATUS QUO

DESCRIPTION:

Provide fiscal support to encourage and strengthen current activities. Localities would provide incentives to establish the type of cooperative arrangements that would be appropriate to their context. This would also include measures to resolve problems that currently detract from existing industry-education cooperative arrangements. Little control would be exerted over the type or nature of cooperative activities.

INTENT:

To stimulate and strengthen cooperative activities without exerting too much control, thus allowing localities the opportunity and the freedom to establish the cooperative arrangements they deem appropriate.

JUSTIFICATION:

1. With the current level of interest in VEPS cooperation many innovative practices are being initiated. For interest and creativity to flourish, incentives must be provided with minimal control.
2. This approach would be consistent with the philosophy of New Federalism and the preference of local jurisdiction.

ASSUMPTIONS:

1. Current VEPS cooperative activities would be acceptable and would move in a direction that would be consistent with present trends and future needs of vocational education.
2. All localities have an interest in and perceive the need for engaging in cooperative activities.

ADVANTAGES:

1. No responsibility on part of federal government
2. Minimum disruption and discontent in the vocational education community.
3. Leaves room for creativity and flexibility
4. Much local support for problem-solving funds

DISADVANTAGES:

1. Lack of control necessary for providing direction.
2. The interests of individual localities may not be in the best interest of vocational education.
3. Not all cooperative arrangements would be acceptable or productive.
4. Would not provide consistent direction for the future.
5. Not all localities would have an interest in strong VEPS cooperation.

POLICY AREA 4: CREATION OF NEW STRUCTURES

DESCRIPTION:

Provide fiscal incentives and support to create new structures for VEPS cooperation. This could include school-based or industry-based models or the institution of collaborative or mediating bodies. Also fitting within this category would be the use of currently existing exemplary and promising cooperative arrangements as models for the development of future cooperative structures.

INTENT:

To create a system of VEPS cooperation that would provide the most effective vocational education services and best utilizes the resources of the vocational education community and the private sector.

JUSTIFICATION:

Vocational education has reached a turning point where some definite action must be taken to enhance both the capacity to deliver services and the quality of the services delivered.

ASSUMPTIONS:

1. New structures would be necessary to maximize the benefit of VEPS interaction.
2. The desired future for VEPS cooperation would be known.
3. The present status of VEPS cooperation is not in concordance with what would be best for the future of vocational education.

ADVANTAGES:

1. Direction would be provided to the field.
2. Would focus on the quality of services and not the protection of interest.
3. Would stem trend of industrial infringement on training activities.
4. There would be some unity in focus among localities.
5. Incentives could be established to make the participation of industries less voluntary and more a responsibility.

DISADVANTAGES:

1. Discontent because of change in status quo
2. Greater responsibility to be assumed by the overseeing agency
3. Greater cost to the funding agent

Each of the policy areas just presented was then analyzed based on its advantages, disadvantages, and the resistance potential. From this analysis, twenty-eight specific policy examples were identified (see appendix B for a detailed analysis of each option). Presented next is a listing of the policy examples in each policy area. Under the area of *fiscal nonintervention* are the four following policies:

- Restructure present vocational education planning requirements and funding formulae to reflect the priority given to VEPS cooperative activities.

- Create a federal clearinghouse on VEPS cooperation. The unit would systematically monitor the field and collect and disseminate pertinent information.

- Identify a representative set of cooperative relationships and develop and publish case histories of these cooperative arrangements noting essential factors such as situations where they could be appropriate, potential facilitative and impeding factors, and how local institutions would go about developing such arrangements. In this context representatives would refer to different coordinative structures, or to coordination in different vocational areas.

- Institute professional standards for vocational instructors that make it mandatory to show evidence of professional growth every two years. Evidence could include work in industry or participation in industry-sponsored technical workshops.

In the policy area of *knowledge generation*, four possible policies were delineated:

- Fund research studies to conduct in-depth investigations on specific aspects of VEPS cooperation. Such studies should be the substance of what can be called "a theory" of VEPS cooperation. Such a theory would note what works, what does not, and why. It would also give some indication of ideal practices given the unique features of certain localities.

- Provide seed money to fund a VEPS clearinghouse.

- Develop a resource file or catalog of VEPS cooperative practices that note the context-specific facilitators and barriers that could determine success or failure.

- Provide funds to create the opportunities for VEPS exchange and dialogue.

Policies to *maintain and support the status quo* were analyzed, with the following ten possible policies being identified:

- Provide the appropriate incentives (tax write-off, wage subsidies, training subcontracts) for local companies to support vocational education programs. Provide the largest remuneration, or the most attractive incentives, to companies that provide support in areas in which there is a known and expressed deficiency by local vocational education personnel. Remuneration should be contingent on the degree to which the support received addresses a high-priority need.

- Establish curriculum evaluation committees consisting of representatives from industry to evaluate each postsecondary vocational education program at least once per year.

- Require a full-time position of private-sector coordinator at each postsecondary vocational institution. Provide a portion of the funding for each position as an incentive to establishing the position.

- Mandate measures to give all vocational instructors one month paid leave at least every two years to work in industry in their area of speciality, or to pursue an approved updating course provided by representatives from industry.

- Supply funds to industries on a competitive basis to provide updating instruction for vocational and technical teachers.

- Provide funds for VEPS cooperation demonstration sites in each state. These demonstration projects would not be targeted to any specific objective to be accomplished.

- Initiate a federal insurance program to cover liabilities of vocational education students or faculty who participate in in-plant educational activities. This would prevent liability concerns from being a major deterrent to the stability of cooperative ties.

- Provide a mechanism for the establishment of technology priority councils (TPC's) at the state level where representatives of state government, vocational education, labor, and industry get together to formulate the training priorities of the state to which all would strictly adhere and channel resources.

- Provide funds for targeted demonstration projects to develop the appropriate VEPS cooperation structures for addressing specific problems in vocational education. Such problems would include economic development, industrial productivity, and school improvement. It is conceivable (and necessary) that different structures would be formulated to address each of these. As part of the requirement for reporting, these sites should specify strategies, identify context specific inhibitors and facilitators, and assess the transferability of these projects to predetermined localities.

- Provide funds so that local areas, regions, or states can develop a registry of employees from industries with state-of-the-art knowledge who would be available to provide instruction at vocational institutions on a part-time basis. A system must be so developed to allow some kind of compensation to industry for its cooperation in providing the service.

Implementing *restructuring policies* could take any of the following ten forms:

- Sponsor specialty training centers or centers of excellence so each state will have one center to represent each vocational area. These centers would serve the purpose of keeping the system of training in the respective vocational area abreast of what is occurring in the field. As such, one of their functions would be the systematic dissemination of knowledge to similar programs in the state. These centers could also be used as upgrading centers for teachers in the respective technical areas. Centers would be housed in an industrial facility and would be jointly sponsored by the federal government and industries representing the vocational area. The center would utilize the resources of industry or vocational education. Training centers would have the latest technology, latest equipment and experimental/future technologies.

- Create a national industry/education cooperative structure having interagency representation (vocational education, national unions, professional organizations, U.S. Department of Labor, etc.) with a parallel structure at the local level. Its prime purpose would be facilitating the most feasible union between vocational education and the private sector.

- Provide appropriate incentives for the establishment of adopt-a-program cooperative relationships, in which a group of industries (or one industry) would assume total responsibility for the effectiveness of a specific vocational program. Using a concept similar to advisory councils, each program would have a group of industry/business benefactors.

- Provide incentives for the development of a VEPS cooperation foundation. A small corporate tax would be used to fund industry/vocational-education cooperative relationships. The foundation could be set up so that a vocational-education/private-sector cooperation review board, comprised of representatives from industry and vocational education, would be responsible for the disbursement of funds that would be used to fund vocational-education/private-sector cooperative activities.

- Create policies that require most vocational education programs to include an industrial experience component for which participating industries would be paid. Participating industries would have to develop a training system that would follow specified guidelines to secure approval from a designated committee of individuals from industry and vocational education.

- Require the formulation of industry assistance plans (IAPs) so that industries could develop plans to provide assistance to vocational educational institutions. Industries should be paid a direct sum, or a scaled level of tax benefits could be provided according to the completeness of assistance, the level of industrial investment in time, money effort, new equipment, and new facilities.

- Provide the necessary tax incentives (or other incentives) so that industries could donate equipment to equipment banks in every state. The bank would be managed by an advisory board made up of representatives from vocational education and industry. Equipment would be housed in a facility built with federal, state, and industrial funds, with the federal government making the largest contribution. A computerized national network would be set up so that there could be trading or delivering between states.

- Create in-school production shops for specific vocational areas. Industries would have an extension of their facilities at the vocational institution. Curricula and training strategies would be developed by vocational education and industry representatives. The burden of preparation of these facilities would be mutually shared by the federal government, state government, and local industry. Alternatively, facilities could be housed in local plants; the same structure would hold.

- Implement a policy in which federal contracts are issued to firms on a competitive basis to provide services in vocational education. Services would include updating teachers, curricular evaluation, and modifying equipment.

- Provide support for the development of entrepreneurial training and production centers (ETPCs). These would be industry/vocational-education cooperative arrangements for the development of small business enterprises in specific vocational education program areas that would be training as well as production facilities.

With assistance from selected professionals in the vocational education field, the twenty-eight policy strategies just presented were rated so that the most acceptable among them could be identified. Each policy was examined and evaluated on a rating sheet with eleven criteria, and each criteria was evaluated on a ten-point scale. Since some of the evaluative criteria were assumed to be more important than others, some of the criteria were weighted more heavily than others. The following is a list of the eleven criteria, with the respective weights enclosed in parentheses:

- Advantages outweighing the disadvantages (2)
- Resistance potential (1)
- Nature of anticipated/intended consequences (1)
- Nature of possible negative, unintended consequences (1)
- Possibility for successful implementation (1)
- Political feasibility (1)
- Probability for a change in status quo (1)
- Benefit/cost ratio for industry (2)
- Benefit/cost ratio for vocational education (3)
- Benefit/cost ratio for oversight agencies (1)
- Benefit/cost ratio for clients (4)

After each of the twenty-eight policies was evaluated, the weights were applied and the score of each criterion was summed for each policy. The twelve policies with the highest ratings were selected for further analysis (see Chapter 5). These twelve policies are as follows:

- Restructure vocational education planning requirements and funding formulae.
- Offer incentives for local companies to support vocational education programs.
- Establish full-time private-sector coordinators (PSC) at each vocational education institution.
- Provide funds to industry for professional updating of teachers.
- Establish multiagency technology priority councils (TPCs) to develop training priorities.
- Allocate funds for target demonstration projects to develop vocational-education/private-sector cooperative structures that address specific problems.
- Develop a registry of employees from state-of-the-art industrial facilities who would be available for loan to vocational institutions.

- Sponsor a speciality training center or centers of excellence.
- Institute adopt-a-program cooperative relationships.
- Create a vocational-education/private-sector cooperation foundation supported by small cooperative tax.
- Formulate industry assistance plans.
- Make available federal contracts to industries so they can offer training services.

CHAPTER 5

DETAILED ANALYSIS OF RECOMMENDED POLICIES

Although the twelve policy alternatives that are recommended were derived from the use of specific criteria, and although they were generated in an atmosphere of discussion and compromise, there is still some discomfort about recommending specific policies as preferred to others. Such discomfort arises because each policy has its unique value and its inherent disadvantages. Not knowing the range of policy choices the policymaker will face, and, not knowing the compromises that may be necessary in the policy development process, it is difficult to ascertain which policy alternative will "best fit" the circumstances existing at the time of policy development.

Therefore the most prudent course of action is to examine the policies from the perspective of the contribution they can make to the field and to provide detailed analyses so that the decision maker can have some foreknowledge if any of the policies were to be pursued. In choosing twelve of the twenty-eight policies listed in the preceding chapter, participants in the decision-making process were asked to place a heavy emphasis on policies that had the potential of making significant contribution to vocational-education/private-sector (VEPS) cooperation. Having chosen these, this section of the paper examines each so consideration can be given to the possibility of their development and implementation.

The following pages outline each of the twelve policy recommendations, presenting an overview of each policy alternative, an analysis of the effects, and a cost-benefit analysis. This examination enables the policymaker to draw conclusions regarding policy development and implementation.

A word of caution is necessary before this section is examined and interpreted. The information contained in each alternative is not exhaustive. Since the consideration posed for each alternative is basic and preliminary, it is intended only as a framework for more in-depth deliberations.

Examinations of this chapter will reveal that there are no ideal policies. Although each policy has some inherent value, each has limitations to implementation; each has some negative unintended consequences and short- or long-range effects; and each has unattractive benefit-cost ratios for some participating entity. The choice of policy is truly contingent on the demands of the arena for policy development.

Policy #1: Restructuring vocational education planning requirements and funding formula.

OVERVIEW

POLICY DESCRIPTION

Restructuring present vocational education planning requirements and funding formulae to reflect the priority given to vocational-education/private-sector (VEPS) cooperative activities. Currently, in vocational education legislation a higher weighting is given to disadvantaged areas of the state and other factors that reflect the priority given them. Likewise, priority could be given to local areas that could demonstrate a given degree of cooperative relationship with industry. The funding formulae would accommodate this by the weight established for this factor. Other aspects of state planning for vocational education could also reflect this priority.

CONSIDERATIONS FOR MONITORING

Monitoring would be accomplished under the compliance arrangements already established by the federal government and the program evaluation arrangements already established by states.

CONSIDERATIONS FOR EVALUATION

To ensure that the cooperative relationships would indeed be worth the increased allocation of funds, standards should be set up to evaluate the quality of cooperative relationships. Such standards should include (1) the level of contribution, (2) the extent of benefits to students, (3) the level of responsibility assumed by the cooperating industry, and (4) the representation of vocational program areas. Some requirements should be instituted in the federal regulations concerning the regularity of evaluation.

LIMITATIONS IN IMPLEMENTATION

It takes time and expertise to develop and institutionalize funding formulae. Some time would have to be invested by the state agency (to which some may resist) and technical assistance might be necessary to institutionalize a funding formula that reflects VEPS cooperation as a national priority.

There are varying levels of adequacy in VEPS cooperative relationships. The standard for what would be acceptable in terms of a cooperative venture would be difficult to establish and could be somewhat controversial. When established, it could be a constant source of discontent and challenge. Some statewide concensus on standards would be necessary if this were to be implemented.

IMPACT EVALUATION

EFFECTS	Short-range effects would be the sensitivity of state and local vocational education personnel to the importance of VEPS cooperation. Some cooperative structures could result. Because of the "stop gap" measure of such a policy, there may not be any significant changes. Current VEPS cooperative ties would continue to exist if this measure were not implemented along with others that are more directive.
CONSEQUENCES	The intended consequence would be the creation of a sense awareness and the motivation of cooperative initiatives. Unintended consequences could be the burden such a policy would create and the possibility that the total system could respond in a compliance mode without seriously considering changes in the system.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This could be successfully implemented because of the ease of institutionalization. The basic structure already exists for its operation.
POLITICAL FEASIBILITY	Quite feasible.
POTENTIAL FOR CHANGE OF STATUS QUO	Would not change status quo. Already existing structure would accommodate changes.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	None.	Large influx of vocational education personnel seeking to develop cooperative ties. The private sector would be able to choose the nature of involvement and might well capitalize on the opportunity for its own benefit.
VOCATIONAL EDUCATION	Would have to restructure procedures. State department would have to tolerate the discontent of localities. Could require the reassignment of personnel.	Better quality programs Increased awareness and use of the private sector

OVERSIGHT AGENCIES	Toleration of discontent Developing measures to assist states in the implementation of the policy. May have to provide technical assistance.	Would have cleared a path to accomplishing VEPS cooperation.
CLIENTS	None.	

Policy #2: Offer incentives for local companies to support vocational education programs.

OVERVIEW

POLICY DESCRIPTION

Provide the appropriate incentives (tax write-off, wage subsidies, training subcontracts) for local companies to support vocational education programs. Provide the largest remuneration or the most attractive incentives to companies that provide support in areas in which local vocational education personnel have identified a known and expressed deficiency. Remuneration should be contingent on the degree to which the support received addresses a high-priority need.

CONSIDERATIONS FOR MONITORING

A system would have to be established whereby local vocational education personnel develop a prioritized list of programs for which industry support is needed. These would be used as a basis for determining the level of compensation to be given to respective industry. The types of incentives for given levels of participation would have to be firmly established.

Monitoring would be accomplished through the development of standards of performance and evaluating requirements.

CONSIDERATIONS FOR EVALUATION

If a significant amount of funds were to be invested in cooperation, then it may be necessary for the federal government to fund the position of a VEPS evaluation at the state levels. This person could assume responsibility for evaluating the adequacy of cooperative ties to ensure that any cooperative venture would be in the best interest of vocational education and that such ventures were of the quality that warrant funding.

LIMITATIONS IN IMPLEMENTATION

One must admit that any active and responsible involvement by the private sector would incur significant effort on their part. Incentives would need to be sufficiently attractive to secure the participation of private industry, which could be quite expensive. One has to weigh the cost of such an effort against the forgone benefits that could be accrued to other parts of the vocational education enterprise.

IMPACT EVALUATION

EFFECTS

The short-range effect would be a variety of meaningless efforts on the part of industry to secure the benefits be accrued. With the establishment of standards and a high level of monitoring and evaluation the long-range effect could be significant. Industry could realize the potential of the vocational education system and a closer bond could be established between education and work.

CONSEQUENCES	The intended consequence would be the support by industry for vocational education. Contributions of equipment facilities, financial and human resources, and so forth would be the natural outcome. An unintended consequence might be that some industries may try to use this opportunity to sell their philosophy, create markets, or somehow use the education institutions for promotional purposes. But another unintended consequence could be the assumption of a high level of responsibility by participating industries.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	To the extent that the incentives were sufficiently attractive, this could be very easily implemented. It is a "win-win" situation. Both vocational education and industry would end up as beneficiaries (at the expense of the federal government).
POLITICAL FEASIBILITY	It would be politically feasible to the extent that it would not draw significantly from other areas of vocational education funding.
POTENTIAL FOR CHANGE OF STATUS QUO	No significant change in status quo would occur.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Paperwork to secure funds.	Remuneration by the federal government. Tax incentives, wage subsidies.
	Seed money to establish contact with vocational education institutions.	A ready sum of clients.
		Community goodwill.
	Some adjustment to accounting system.	Way of fulfilling corporate responsibility.
	Contributions to the vocational education system.	
VOCATIONAL EDUCATION	No significant cost.	Contribution of resources by industry.
		Closer contact with the industrial community.
		Bond between education and work.
		Increased placement potential.

OVERSIGHT AGENCIES	Significant cost to the federal government.	Getting industries to underwrite some of the cost of vocational education, especially as a long-term investment.
	Increased monitoring requirements.	Indirect avenue for improving the responsiveness of the vocational education system.
CLIENTS	No significant cost to students.	Better training programs because of the availability of better facilities through industrial support.
		Increased probability of placement after graduation.

Policy #3: Establish full-time private-sector coordinators (PSCs) at each vocational education institution.

OVERVIEW

POLICY DESCRIPTION	Require a full-time position of private sector coordinator (PSC) at each postsecondary vocational institution. Provide a portion of the funding for each position. This person would be responsible for the establishment and maintenance of all linkages with the private sector. The person would also be responsible for keeping up to date with the many avenues that have been utilized around the nation to establish linkages.
CONSIDERATIONS FOR MONITORING	Job specifications should be developed for the position, and someone at the state agency should be assigned the responsibility for coordinating their activities and facilitating their work. A yearly federal report should be required of all states specifying the accomplishments that have been made by the PSCs.
CONSIDERATIONS FOR EVALUATION	Standards of performance should be developed. State personnel should be required to conduct a yearly evaluation as to the extent to which these persons meet the stated standards. Standards could include such factors as (1) number of cooperative relationships, (2) program representative of relationships, (3) level of contribution, and (4) evidence of increased placement or student performance that could be attributed to the cooperative arrangement.
LIMITATIONS IN IMPLEMENTATION	To accomplish this would require addition to the bureaucratic structures from the state to the local levels. It would require more paperwork and a high level of federal involvement if positions are federally funded. Some resistance could be expected. Measures should be taken to prevent local adminstrators from using these personnel for other activities.

IMPACT EVALUATION

EFFECTS	As time elapsed there would be a firmer bond between the vocational institution and the school. It should be expected that this would result in higher-quality programs and increased placement of students. While we would witness some inefficiencies in the short run, the long-term benefits could be tremendous.
CONSEQUENCES	A closer bond between vocational education institutions and industry would be the natural consequence. Unintended consequences could be the development of trust between agencies, the growth of new and creative training arrangements,

	and the increased awareness among instructors at the institution as to the potential contributions of industry. It would also relieve the instructors of the responsibility of maintaining industrial contact.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This could be very successfully implemented because of the obvious contributions such an individual could make to an institution. If there were no cost to the institution, this could be even more appealing.
POLITICAL FEASIBILITY	Quite feasible because of appeal. Much would be dependent on funding and the relative importance of VEPS cooperation among other federal, state, and local concerns.
POTENTIAL FOR CHANGE OF STATUS QUO	No significant change in status quo would occur.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Time to be spent with the coordinator.	Increased availability of training services.
		Closer contact with the pool of labor.
	Cost of potential involvement.	Corporate social responsibility.
VOCATIONAL EDUCATION	Resources to fund the position.	Closer bond with industry.
	Support services.	Instructors and administrators relieved of the responsibility of maintaining contact with industry.
		Possibility for increased placement.
		Availability of various forms of support from industry.
OVERSIGHT AGENCIES	Quite costly if such positions were to be funded by the federal government.	An avenue for industries to underwrite the cost of vocational education.
		A closer bond between education and work initiated.
	Increased paperwork.	
	Increased monitoring responsibilities.	
CLIENTS	No significant cost.	Better programs.
		Increased probability of placement.

Policy #4: Provide funds to industry for professional updating of teachers.

OVERVIEW

POLICY DESCRIPTION

Funds should be provided to industries on a competitive basis to provide updating instruction for vocational and technical teachers. Requests for proposals relating to specific program areas could be sent out to appropriate industrial concerns. Guidelines could be provided about the requirements for the delivery of services to ensure that the training program covers a wide enough scope of concerns.

This could be accomplished through the mechanisms that are already established to issue request forproposals.

CONSIDERATIONS FOR MONITORING

Careful examination must be made of the content for instruction and the facilities that would be available for the delivery of services. Standards should be set and state personnel should assume the responsibility for enforcing those standarads. At the end of each contract (or training session) reports should be written covering content, procedures, participation, success rate, and so forth. This may be the most appropriate federal monitoring instrument.

CONSIDERATION FOR EVALUATION

Once standards of performance have been set, state personnel could conduct evaluations of training facilities. A yearly evaluation report of all such activities could be prepared by the state agency.

LIMITATIONS IN IMPLEMENTATION

Unless the compensation were very attractive, the firms with the best capacities for delivering such services might not participate. It would represent a significant commitment of time on their part. Mediocre firms may then grasp the opportunity to increase their profit margin.

The staff development function in state departments would lose some control. This could create some initial resistance but they would work cooperatively with industry to accomplish the updating function.

IMPACT EVALUATION

EFFECTS

The short-range effects would be a flurry of activity by firms to "share the wealth," and very small and very large firms might not participate. As time passes, however, the teacher updating training function could become one of the corporate social responsibilities of large and recognized firms. Eventually, the

	teacher updating (staff development) function would be the responsibility of selected industries.
CONSEQUENCES	Implementation of this policy would result in effective updating of teachers. Implementation could result in discontent of some state staff development personnel, and disappointment among the university personnel who have been accustomed to performing this service. Industries might use the opportunity for recruitment.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This could be successfully implemented if the rewards to industry were sufficiently lucrative.
POLITICAL FEASIBILITY	Some resistance would be encountered, but because of its potential for making vocational education more responsive to technological changes, it would be feasible.
POTENTIAL FOR CHANGE OF STATUS QUO	Status quo would change. Resources would be allocated to industry and not vocational education. There would be a modest change in status quo since the staff development function would be performed by industry.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Proposal development time.	Financial compensation for delivery services.
	Preparation of facilities.	Improved status in education (and probably industrial) community.
	Taking workers from production for training.	Source of recruitment of personnel.
	Increased paperwork.	
VOCATIONAL EDUCATION	Monitoring and evaluation cost.	Effective technical updating of teachers.
		Would shed some of the responsibility of paperwork.
	Time expended in establishing linkages so that teachers could participate.	Would minimize the criticisms of teachers lagging behind.
OVERSIGHT AGENCIES	Financial cost of retraining.	Improvement of vocational education nationally through the updating of teachers.
	Cost incurred for monitoring and evaluation.	Recognition for leadership in the area.

		Credit for fostering a closer link between education and work.
CLIENTS	No cost to students.	High-quality programs because of better prepared teachers.
		More up-to-date training.

Policy #5: Establish multiagency technology priority councils (TPCs) to develop training priorities.

OVERVIEW

POLICY DESCRIPTION

Provide a mechanism for the establishment of technology priority councils (TPCs) at the state level where representatives of state government, vocational education, labor, and industry would get together to formulate the training priorities of the state to which all would strictly adhere and channel resources. As part of their yearly deliberation about priorities, each group represented in the council could note the contributions their group would be willing to make so the high-priority items could be addressed.

The mechanism for establishing such a council could be federal legislation with financial resources as the incentive.

CONSIDERATIONS FOR MONITORING

Council could develop a report that (1) notes the process for establishing priorities; (2) describes each of the major priorities and the plan for addressing them; (3) describes the contribution each group would make; and (4) describes a plan for evaluating the accomplishment of prioritized items at the end of the year.

CONSIDERATIONS FOR EVALUATION

The council could develop an accountability report noting the extent to which objectives have been accomplished. Evaluation would entail a comparison of the evaluation plan and the accountability report by the oversight agency.

LIMITATIONS IN IMPLEMENTATION

There are currently a variety of federal- and state-mandated coordinative and advisory groups. This council might have overlapping membership and overlapping functions that could detract from its effectiveness and influence. Local jurisdiction might not be willing to ignore their own priorities in favor of those developed by the TPC.

IMPACT EVALUATION

EFFECT

In the short term, the council would only be effective in pointing out some areas of emphasis annually. With the multiagency contribution, some of these areas would be addressed in a few localities. But as time passed and the councils secured respect for the contributions they made and with the influence they develop, there could be a close bond among many people in the training arena.

CONSEQUENCES	The intended consequence would be the development of a unified approach to address issues relating to training and the use of technology in industry. This might not occur. But one of the unintended consequences could be that the very mechanism could be divisive if participants could not reach consensus on priorities or if power were perceived as being unequally shared.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This could be successfully implemented primarily because of the potential of the group to have broad influence and because of the multiagency representation.
POLITICAL FEASIBILITY	Very feasible if at the outset there were domain consensus among participants and even more feasible if participants could agree on mutual expectations. To the extent that these cannot be accomplished, the political feasibility would be minimal .
POTENTIAL FOR CHANGE OF STATUS QUO	Would change status quo since priorities would be established by this council instead of local districts or the federal government. Authority for this activity would transfer from specific state and federal agencies to this council with broad-based representation.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Time spent monitoring the council and organizing to make some contribution.	Better-trained personnel.
		Areas of short supply of graduates would be addressed.
	Contributions that would be made by participating industries.	Tax privileges for contributions.
		Community goodwill.
VOCATIONAL EDUCATION	Time spent interacting with council and respective industries.	Contributions from industry.
		Better link (integration) in delivery of training services.
	Might have to ignore some local priorities in favor of those formulated by the council.	Opportunity for higher-quality and more relevant programs.
		Opportunity for innovative programming in areas of high priority.
OVERSIGHT AGENCIES	Cost of funding the council.	Responsiveness of vocational education.

	Cost incurred monitoring and evaluating.	Widespread support for high priority activities in which vocational education participates. Integration of responsibility for vocational education.
CLIENTS	No cost to students.	All the benefits that could be accrued from higher-quality programs. Increased probability of placement in high-priority technological areas.

Policy #6: Allocate funds for target demonstration projects to develop vocational-education/private-sector cooperative structures that address specific problems.

OVERVIEW

POLICY DESCRIPTION

Provide funds for targeted demonstration projects to develop the appropriate vocational-education/private-sector (VEPS) structures for addressing specific problems in vocational education. Such problems include economic development, industrial productivity, and school improvement. It would be conceivable (and necessary) that different structures should be formulated to address each of these. As part of the requirement for reporting, these sites should specify strategies, identify context-specific inhibitors and facilitators, and assess the transferability of these projects to predetermined localities. If vocational education is to address these issues through VEPS cooperation as noted in the literature, then some exemplary arrangements specifically directed at these problems should be developed.

CONSIDERATIONS FOR MONITORING

Determination should be made about what the essential characteristics and functions of these demonstration sites would be. Sites should be required to submit reports to show that they were fulfilling the intended role. This, in addition to occasional visits to sites by federal Department of Education personnel, should be adequate for monitoring.

CONSIDERATIONS FOR EVALUATION

Sites should be evaluated against the criteria specified in the description above. The key criterion should be the transportability of the structure demonstated in the project. Evaluations should be performed by federal personnel.

LIMITATIONS IN IMPLEMENTATION

The mechanisms are already in place to implement such a policy. Limitations would be related to maintaining the demonstration or exemplary nature of such projects and ensuring that the ideas conceived in their operation find their way to others in vocational education who might want to address similar problems.

IMPACT EVALUATION

EFFECTS

The short-range effect would be the conceptualization of exemplary VEPS arrangements to address specific issues. Funds would enable ideas to be nurtured into viable systems for resolving pressing issues in vocational education.

The long-range effect would be the establishment of a variety of proven interagency structures for addressing problems in

	vocational education. These structures would be implemented in localities where problems exist.
CONSEQUENCES	Consequences would be (1) the resolution of pressing problems in vocational education and (2) the creation of systems for addressing problems. Unintended consequences might be a firm bond that develops between vocational education and the private sector because of the experience of working together toward a common goal.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This could be very easily implemented because of its potential to contribute and because the mechanisms for its operation are in existence.
POLITICAL FEASIBILITY	Very feasible.
POTENTIAL FOR CHANGE OF STATUS QUO	Little change in status quo would result. Obviously, institutions that were selected as demonstration sites would gain some degree of status in the field.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Time spent participating in the project.	The resolution of problems that could affect production or service responsibilities.
VOCATIONAL EDUCATION	Proposal development time.	Recognition as a leader in the field for the institution chosen.
	Time to manage and operate project.	Financial remuneration from the federal government.
	Increased paperwork.	The subsequent availability of proven cooperative methods for addressing specific problems and issues.
OVERSIGHT AGENCIES	Cost of funding project.	Recognition for leadership.
	Oversight responsibility.	Availability of proven cooperative method for addressing specific problems and issues.
CLIENTS	No cost to students	Indirect benefits to the extent that such efforts would improve the quality of programs.

Policy #7: Develop a registry of employees from state-of-the-art industrial facilities who are available for loan to vocational institutions.

OVERVIEW

POLICY DESCRIPTION

Provide funds so that local areas, regions, or states could develop a registry of employees from industries with "state of the art" knowledge who would be available to provide instruction at vocational institutions on a part-time basis. A system should be developed to allow some kind of compensation to industry for cooperating by providing the service.

CONSIDERATIONS FOR MONITORING

Would require consistent monitoring of technology changes to keep abreast with the industries that possess state of the art knowledge. Monitoring would also be required to ensure that the registry were kept up to date and that it continued to be functional for its users.

CONSIDERATIONS FOR EVALUATION

Evaluation mechanism should be developed to ensure that the system would be beneficial to vocational education and to the industrial community. Yearly evaluating reports should be prepared to describe the effectiveness of the system. Annual cost-effective analysis of the system should be conducted.

LIMITATIONS IN IMPLEMENTATION

The effectiveness of the system would be contingent on the willingness of leading industries to participate. Their participation and commitment would depend on whether or not they could accrue acceptable benefits from participation.

It is also questionable as to whether the registry could be kept up to date—different industries would move into leadership roles; personnel who would be willing to participate could change as could industries.

Whether or not vocational education institutions would use such a document is questionable.

IMPACT EVALUATION

EFFECTS

Would provide a ready source of personnel for updating teaching personnel and students. The idea might be appealing at first, but the appeal could wither as time passes. Industry could perceive its participation as a burden, and schools could try to exploit the availability of services with the end result being disappointment, frustration, and neglect.

CONSEQUENCES	The intended consequence would be support for the vocational education community in terms of up-to-date personnel. Unintended consequences could materialize in the long run if caution were not observed. (Some of these are noted above.)
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	Successful implementation would depend on whether or not some individual would be assigned the sole responsibility of devloping and maintaining a registry. Updating activities would be substantial.
POLITICAL FEASIBILITY	Quite feasible.
POTENTIAL FOR CHANGE OF STATUS QUO	Some resources and status would be transferred from the state and federal departments of education to participating industries.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Time taken to give necessary information. Loss of personnel from actual production.	Opportunity to fulfill corporate social responsibility. Could be a way of rewarding workers.
VOCATIONAL EDUCATION	Time devoted to make arrangements.	Qualified teachers at little to no cost. Updated programs. State-of-the-art knowledge available.
OVERSIGHT AGENCIES	Cost of funding project for limited period. Monitoring/evaluation responsibilities.	High-quality programs. Mechanism for keeping the program up-to-date.
CLIENTS	No cost to students.	Up-to-date programs.

Policy #8: Sponsor a specialty training center or centers of excellence.

OVERVIEW

POLICY DESCRIPTION	Sponsorship of specialty training centers or centers of excellence that would provide each state with one center to represent each vocational area. These centers would serve the purpose of keeping the system of training in their respective vocational area abreast of what is occurring in the field; one of their functions would be the systematic dissemination of knowledge to similar programs in the state. These centers could also be used as upgrading centers for teachers in their respective technical area. Centers would be housed in an industrial facility and would be jointly sponsored by the federal government and industries representing the vocational area. The center would utilize the resources of industry and of vocational education. Training centers would have the latest technology, latest equipment, and experimental/future technologies.
CONSIDERATIONS FOR MONITORING	These centers would be under the control of apropriate technical representatives in industry. Joint funding would come from federal government and the groups of industries represented. Industries would get together and prepare an operation plan that would detail how the centers would be administered and how they would function. The plan would also include performance and evaluation standards. When the centers became functional, the plans and standards could be used to evaluate performance. Monitoring could be accomplished through the submission of yearly plans and reports.
CONSIDERATIONS FOR EVALUATION	On-site evaluations should be conducted by representatives from the federal Department of Education. The performance and evaluation standards should be utilized for these evaluations. Evaluative measures should be taken to ensure that these centers continue to operate in the best interest of vocational education and in the spirit of providing leadership to the technical area.
LIMITATIONS IN IMPLEMENTATION	As a new organizational structure in the field of vocational education, it could experience a few developmental setbacks. For instance, the location of the centers should be decided upon, content should be developed, a plan of operation should be designed, decisions should be made about who would teach at the centers and who would attend, and decisions should be made about the means for disseminating information to other program areas in the state. It would take some time to get the program off the ground.

IMPACT EVALUATION

EFFECTS	There would be some problem in the short term getting the centers in operation. Conflicts would develop as operational decisions were made. If the concept survives the initial hurdles, the centers could grow into an ideal mechanism for technological sharing between vocational education and industry, and it could become an effective system for maintaining the responsiveness of vocational education.
CONSEQUENCES	• High-quality training. • A system for maintaining responsiveness. • Could encourage industries to make contributions in other ways. • The use of such centers primarily for the private training functions of the firm. Evaluative measures could prevent this from occurring. • Increased confidence of the private sector in the quality of vocational education training.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	Much effort should be expended on the part of vocational education and industry in order for this to be successfully implemented.
POLITICAL FEASIBILITY	This could have moderate political feasibility.
POTENTIAL FOR CHANGE OF STATUS QUO	Significant change in status quo would result if industries were made responsible for the operation of centers, and if the facilities were located at industrial settings. Resources, status, and organizational arrangements would be significantly disrupted.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	High cost to set up facilities and designing means of operation.	Could benefit from an in-plant training and development function that could also be used to prepare and retrain employees.
	Increased paperwork.	Ensures a higher quality of human resources.
VOCATIONAL EDUCATION	Cost in time to establish a relationship with the centers so that benefits could be received.	A system for maintaining responsiveness. Opportunity to work closely with the private sector in accomplishing training under their terms.

		Not critical for a resurgence of creative energy in vocational education institutions.
OVERSIGHT AGENCIES	Funds to support development and operation of the center.	Increased effectiveness in the system for delivering vocational education services.
	Oversight responsibility.	Reduced criticism about the lack of responsiveness of vocational education.
CLIENTS	No significant cost to students.	Better-quality conditions and more up-to-date programs.
		Increased probability of placement because of the increased confidence of the private sector in the quality of training.

Policy #9: Institute adopt-a-program cooperative relationship.

OVERVIEW

POLICY DESCRIPTION	Provide appropriate incentives for the establishment of adopt-a-program cooperative relationships, where a group of industries (or one industry) would assume total responsibility for the effectiveness of the specific vocational program. Using a concept similar to advisory councils, each program would have a group of industry/business benefactors. Incentives could include a variety of tax incentives, wage subsidies, or even preferential treatment in government contracts.
CONSIDERATIONS FOR MONITORING	Monitoring would be to ensure that such relationships continue to operate in the best interest of vocational education. Standards of performance would be developed and these would be used as a guide for monitoring.
CONSIDERATIONS FOR EVALUATION	Like monitoring, evaluation would be to ensure that the relationships operate in the best interest of vocational education. Either state or federal personnel could be responsible for evaluation. Since the federal government would only be making indirect contributions, no formal reporting should be required.
LIMITATIONS IN IMPLEMENTATION	The prime limitation would be the unwillingness of industries to participate in such a venture. It would place quite a bit of responsibility on the participating industry. Another limitation would be the lack of sponsors for certain types of programs since sponsorship would depend on the profitability of the firm. This could give rise to sponsorship being limited to the more sophisticated technical areas. Yet another problem would be the tenure of such relationships. Industries might not be willing to continue if they fail to exceed a certain margin of profit.

IMPACT EVALUATION

EFFECTS	The short-range effect would be the flurry of activity to initiate such programs if the compensation were adequate. In the long run the private sector could recognize substantial gains and this kind of relationship could become institutionalized.
CONSEQUENCES	The prime consequence would be effective and up-to-date programs and a closer bond between vocational education and the private sector such that there would be a continuity between education and work. It is hoped that industries would assume more responsibility and have greater commitment to

	training. An unintended consequence could be that the program might begin to reflect the philosophical and technological bias of some industries.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	If incentives were adequate, this could very easily be implemented.
POLITICAL FEASIBILITY	Very feasible politically. Again, the issue would be the benefits to be accrued by industry. Another concern would be the degree of oversight control that would be exerted by federal agencies.
POTENTIAL FOR CHANGE OF STATUS QUO	No significant change in status quo would occur.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Significant cost to industry time-wise, financially, and materially.	Would meet corporate social responsibility. Tax benefits or other federal "privileges." Opportunity to influence the preparation of a pool of potential workers.
VOCATIONAL EDUCATION	Except for time and organizational arrangements, cost would be minimal.	A constant source of support. Higher-quality programs. Opportunity to increase placement.
OVERSIGHT AGENCIES	Minimal cost. Some lost revenues; but this would be outweighed by the benefits to vocational education from such relationships.	An improved system of vocational education. Relief from implementing artificial measures to ensure an effective vocational education system.
CLIENTS	No cost to students.	Higher-quality programs. Increased probability of placement.

Policy #10: Create a vocational-education/private-sector cooperation foundation supported by a small cooperative tax.

OVERVIEW

POLICY DESCRIPTION	Provide incentives for the development of a vocational-education/private-sector (VEPS) cooperative foundation. A small corporate tax could be used to fund VEPS cooperative relationships. The foundation could be set up so that a Vocational-Education/Private-Sector Cooperation Review board comprised of representatives from industry and vocational education could be responsible for the disbursement of funds that would be used to fund VEPS cooperative activities.
CONSIDERATIONS FOR MONITORING	The objective of the VEPS cooperative foundation should be established and standards of performance should be determined. The review board would be allocated the responsibility of ensuring that objectives were met and that standards were maintained. The review board would be required to prepare a yearly plan of action and an evaluation report.
CONSIDERATIONS FOR EVALUATION	Evaluation standards would ensure among other things that (1) funds were equitably distributed, (2) funds were distributed for legitimate purposes, and (3) the funds were effectively utilized.
LIMITATIONS IN IMPLEMENTATION	There could be significant resistance by industry toward payment of additional taxes. Problems could also arise relating to procedures for the disbursement of funds and among the activities for which funds could be legitimately used.

IMPACT EVALUATION

EFFECTS	In the short run there would be a flurry of cooperative activities to secure funds. As time passes, relationships would be stabilized and firm bonds would be established from the many creative attempts to engage in cooperative activity.
CONSEQUENCES	Many more cooperative bonds between vocational education institutions and the private sector would be established. There would also be a greater sensitivity to the value of cooperation. If funding were not sufficiently attractive, increasingly fewer institutions would participate and the system could become ineffective.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	If industries were willing to pay the corporate tax, then the system could easily be implemented.

POLITICAL FEASIBILITY	Moderate political feasibility because of anticipated resistance from some corporations.
POTENTIAL FOR CHANGE OF STATUS QUO	No significant change in status quo would occur.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Substantial cost because of increased taxation.	Opportunity to exert some control of VEPS cooperative activities. Funds available to underwrite the cost of relating to vocational education institutions that might no longer be needed.
VOCATIONAL EDUCATION	Minimal cost. Only cost in terms of time spent by personnel.	Better programs. Opportunity to underwrite the cost of developing cooperative structures.
OVERSIGHT AGENCIES	Minimal cost.	The improvement of vocational education through increased support from industry.
CLIENTS	No cost to students.	Benefits to be accrued from the availability of better programs.

Policy #11: Formulate industry assistance plans.

OVERVIEW

POLICY DESCRIPTION	Require the formulation of industry assistance plans (IAPs) so that industries can develop plans to provide assistance to vocational education institutions. Industries should be paid a direct sum, or a scaled level of tax benefits could be provided according to the completeness of assistance and the level of industrial investment in time, money, effort, new equipment, and new facilities.
CONSIDERATIONS FOR MONITORING	The plans would be evaluated by the federal government before any funds were distributed as to the worthiness of the plan and the level of benefits to be received. Monitoring would be accomplished through an accountability system wherein vocational education personnel review the plans that were submitted and kept track of the assistance received.
CONSIDERATIONS FOR EVALUATION	The prime focus of evaluation would be whether or not the assistance noted in the plans was provided. Evaluation should also be made to ensure that any assistance was in the best interest of the vocational education program. At the end of the funding period the firms could be requested to prepare accountability reports to assess the degree to which their performance was consistent with the plans.
LIMITATIONS IN IMPLEMENTATION	The private sector could well consider the rewards too small for the enormity of the task. Here again, the larger industries might not be attracted to such a venture.

IMPACT EVALUATION

EFFECTS	If the rewards were sufficiently attractive, many industries would participate in this venture in the short and long run and this would increase the level of private-sector support for vocational education activities.
CONSEQUENCES	This would formalize the fragmented and unorganized voluntary efforts of the private sector. It would also enable vocational education institutions to pursue a course that was in its best interest, and there would be no needed restructure of delivery systems to accommodate voluntary contributions.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	This would have a mediocre possibility for implementation since industries would be unwilling to accept the burden of such a formalized structure unless there were lucrative rewards.

POLITICAL FEASIBILITY	Very feasible politically.
POTENTIAL FOR CHANGE OF STATUS QUO	Status quo would not change. The unorganized system of support would become formalized.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Large investment in time to prepare plans.	Financial remunerations for the delivery of services.
		Opportunity to influence the public training function.
VOCATIONAL EDUCATION	No significant cost.	Formalized system of support from the private sector.
		Opportunity to align institutional needs with the volunteer resources of the private sector.
OVERSIGHT AGENCIES	Time to fulfill oversight responsibilities	Having industry underwrite some of the cost of delivering vocational education services.
		Closing the gap between education and work.
CLIENTS	No cost to students.	Benefit from high-quality programs.
		Greater opportunities to gain industrial experience.

Policy #12: Make available federal contracts to industries so they can offer training services.

OVERVIEW

POLICY DESCRIPTION	Implement a policy whereby federal contracts would be issued to firms on a competitive basis to provide services in vocational education. Among services that should be included: updating teachers, curricular evaluation, and modifying equipment.
CONSIDERATIONS FOR MONITORING	Monitoring mechanisms are already in place in federal policies for contracting with private agencies. These could be applied to firms that respond to requests for proposals (RFPs) to deliver services to vocational education institutions.
CONSIDERATIONS FOR EVALUATION	RFPs would be evaluated using criteria that would ensure the provision of high-quality services. Here again, provisions are already instituted for the formative evaluation of government contracts.
LIMITATIONS IN IMPLEMENTATION	Much resistance would come from those in the vocational education community, since this would be viewed as infringement on their area of service. The vocational education community must be supportive in order for the policy to be successfully implemented.

IMPACT EVALUATION

EFFECTS	Would involve many companies in the delivery of services to vocational education on a contractual basis. Initial discontent in the short term would turn to support in the long run if services were effectively delivered and if significant contributions were made to the improvement of vocational education.
CONSEQUENCES	A variety of services for which the private sector is better equipped would be delivered to vocational education. This would create a closer bond between these entities in the long run, which would secure more responsibility and commitment from the private sector in cooperative ventures.
POSSIBILITY FOR SUCCESSFUL IMPLEMENTATION	Could be successfully implemented if the rewards were sufficiently attractive.
POLITICAL FEASIBILITY	Mediocre political feasibility.
POTENTIAL FOR CHANGE IN STATUS QUO	Would change the status quo because of differences in resource allocation, status allocation, and organizational arrangements.

COST/BENEFIT ANALYSIS

	Cost	Benefit
INDUSTRY	Cost of preparing proposals. Cost of developing mechanisms for delivering services.	Remuneration for the services delivered. Opportunity to influence the public training system.
VOCATIONAL EDUCATION	No significant cost. Time would be invested in accommodating the industries providing services.	Significant benefits because aspects of the vocational education delivery system could be improved by utilizing the services of industry.
OVERSIGHT AGENCIES	Financial cost to compensate participating industries. Cost of fulfilling oversight responsibility.	Improvement of the vocational education system nationally. Closer link between education and work. Credit for any improvement realized.
CLIENTS	No cost to students.	Participation in high-quality programs.

CHAPTER 6

CONCLUSION

Cooperation between vocational education and the private sector is one of the basic practical ideal in vocational education. We prepare people for jobs; and historically we have considered it necessary to act in concert with the organizations that employ our graduates. Such unison in action can accrue many benefits to both educational and industrial organizations. Generally, it is through such collaborative relationships that vocational education remains responsive to industrial needs, and it is this bond that gives employers an avenue to ensure the effective preparation of their future employees.

History and tradition, however, have done little to strengthen the ties between vocational education and the private sector. After decades of pursuing such relationships, there are still complaints about the primitive and superficial nature of cooperative ties; the field of industry-education cooperation is still described as "fragmented, duplicative, and ad hoc." Even the literature on cooperation between vocational education and the private sector is described as consisting mostly of "anecdotes and testimonials of successful school-business partnerships, and about the need for and virtues of closer working relationships between school and business" (Wise 1981, p. 69).

This does not mean that significant studies have not been made and that exemplary relationships do not exist. What it does mean is that, given the importance of vocational-education/private-sector (VEPS) cooperation to the maintenance of high-quality programs, and given the many decades that this ideal has been central to vocational education philosophy, cooperative arrangements have not matured to the point where there is continuity between education and work—or, for that matter, mutual benefit along with mutual commitment and responsibility. There is abundant cooperation between vocational education and the private sector; however, there is little collaboration and there are almost no relationships that can be described as integrative. Collaboration and integration represent the highest levels of cooperative maturity and many authors in the field have asserted that these levels of maturity are where we should direct our vision.

The present status of VEPS cooperative practice is deeply rooted in the inherent differences between these two entities. The differences lead to a host of problems that undermine the effectiveness of cooperative arrangements. This is further compounded by two major deficiencies in the establishment of cooperative ties. First, policy initiatives and efforts to cooperate are not conceived in a manner that acknowledges the complexities of the business world and the difficulties of attempting to foster harmony among two organizational entities that are unique and historically different. Second, although cooperative initiatives abound, linkage arrangements are formulated without the benefit of proper assessment as to what objectives can be best accomplished cooperatively and what cooperative strategies are most feasible for the attainment of such objectives.

There is dire need for policy in this area. Policy objectives should include creating a sense of awareness and fostering an in-depth understanding in the field, so that both vocational education and industrial personnel can become more sensitive to our interdependence, and both groups can

be attuned to the complexities of, and the possibilities for, cooperation. Policy objectives should also include efforts to establish integrative ties whereby mutual responsibility and commitment accompanies mutual benefit and the gap between education and work is eliminated. Hence, preferable policy options are (1) the creation of an understanding of VEPS cooperation through knowledge generation and dissemination and (2) efforts to restructure the forms of cooperative arrangements so that integrative ties can emerge.

The policy alternatives suggested in Chapters 4 and 5 are attempts to accomplish these policy objectives. The vision of truly integrated VEPS cooperative ties is far more than an empty hope. With a willingness to understand, accommodate, and share; and with the presence of adequate policy stimuli, our hopes can materialize. The gap between training and production or the hiatus between education and work may some day be indistinguishable.

APPENDIX A

SAMPLE LISTING OF VOCATIONAL-EDUCATION/PRIVATE-SECTOR COOPERATIVE PRACTICES

- Industrial resource persons for career orientation (e.g., mock interviews, employability skills)
- Staff development for industrial personnel and vocational instructors
- Donations of equipment
- Sharing of facilities, equipment, materials, personnel
- Donations of scholarships
- Cooperative planning for instructional programs
- Cooperative education—on-site experiences
- Use of industry personnel as instructors
- Financial contributions to support school activities
- Participation of industry personnel on advisory and planning committees
- Industry personnel performing evaluations of curricula, policies, and management practices
- Staff exchange programs (managers, teachers, school administrators)
- Industry provision of labor market information
- Adopt-a-school programs
- Center for business and industry providing joint training to utilize the skills of individuals from both education and the private sector
- Industry services training programs
- Teacher intern programs
- Industrial training programs where the school contracts with a specific industry to conduct specific industrial training for a fee

- Business-sponsored recognitions of outstanding teachers and students
- Training programs set up by industries specifically to train high school students and adults in specific areas
- Use of industry expertise to train vocational instructors
- Development of curriculum materials by industry
- Establishment of a consortium of business and industries, working together with educational institutions, in a shopping center arrangement to provide training and produce goods
- Joint use of expensive machinery
- Technology exchange centers

APPENDIX B

APPENDIX B

INITIAL EVALUATION OF TWENTY-EIGHT POLICY OPTIONS

Policies	Advantages	Resistance Potential
Restructure vocational education planning requirements and funding furmulae.	1. Alerts states and localities of the importance of and priority given to coordination. 2. Ensures that some consideration is given to cooperation in planning. **Disadvantages** 1. State plans become compliance documents that may not affect VEPS cooperative practice. 2. States will have to redesign procedures.	May receive some resistance from vocational education because of perceived burden.
Create a clearing-house for vocational education/private-sector cooperation.	**Advantages** 1. Creates a system of diffusion targeted to the area of VEPS cooperation. Motivates change. **Disadvantages** 1. Cost in designing and operating such a system.	**Resistance Potential** Little resistance. May be the perception that the ERIC system already fulfills this function.
Identify case histories of cooper-ative relationships.	**Advantages** 1. Disseminates knowledge of exemplary coordinative relationships. **Disadvantages** 1. May not be cost-effective.	**Resistance Potential** May be perceived as an inappropriate use of resources. May be the perception that there are better ways of utilizing funds.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Mandate evidence of professional growth for vocational instructors.	1. Ensures that instructors participate in inservice training. 2. Contributes to quality of programs. **Disadvantages** 1. Cost and inconvenience.	Strong resistance from the vocational education community because of potential cost and inconvenience.
Fund research leading to a theory of vocational-education private-sector cooperation	**Advantages** 1. Contributions to general knowledge about VEPS cooperation. 2. Has high potential for improving practices. **Disadvantages** 1. Time span between research and practice.	**Resistance Potential** Concerns about funds not being invested in actual VEPS activities.
Provide seed money for development of a vocational education private-sector clearinghouse.	**Advantages** 1. Encourages the development of collaborated arrangements. **Disadvantages** 1. Loss to funding agency. Especially when success depends on local initiative and interest.	**Resistance Potential** Little resistance. Some concern about the mount of funds that is necessary to develop these ties.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Develop a catalog or resource file on context-specific barriers and facilitators of vocational-education private-sector cooperation.	1. Assists localities in developing cooperative arrangements. **Disadvantages** 2. Questionable as to whether this document will be used sufficiently to warrant its development.	Little resistance. May be some concern about cost-effectiveness.
Provide funds for vocational-education private-sector dialogue.	**Advantages** 1. Creates a forum for communication on a variety of issues. Helps groups to understand each other. **Disadvantages** 1. Dialogue does not always lead to action. Nothing substantial may result.	**Resistance Potential** Little resistance. Concern that funds may be better utilized.
Provide incentives for local companies to support vocational education programs.	**Advantages** 1. More support for vocational education. 2. Involves private sector. **Disadvantages** 1. Support may not be useful unless it is channeled and managed so vocational education is not subject to the whims of the private sectors.	**Resistance Potential** Little resistance.

INTITAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Establish industrial curriculum evaluation committees.	1. Gives impetus for keeping programs up-to-date. 2. Secures industry involvement and commitment. **Disadvantages** 1. Unavailable industrial personnel. 2. Industrial personnel may not give priority to some nontechnical content considered essential by vocational education.	Strong resistance from vocational education because it will usurp some of its evaluative responsibilities.
Requires full-time private sector coordinators (PSC) at vocational institutions.	**Advantages** 1. Ensures some form of VEPS cooperation. 2. Contributes to quality programs. 3. Contributes to close industry ties. **Disadvantages** 1. Cost in a time of budgeting constraints. 2. Position may not have a high priority in some institutions.	**Resistance Potential** Claim may be raised that vocational instructors already perform this function and there is no necessity to create such a position.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Mandate professional development leaves for instructors.	1. Ensures inservice training. 2. Contributes to quality programs. 3. Fosters greater visibility of vocational education in industry. **Disadvantages** 1. Cost to institution. 2. May be inconvenient.	Resistance by vocational education because of potential cost and inconvenience.
Supply fund to industry for professional updating of teachers.	**Advantages** 1. Acts as effective inservice program to keep instructors up-to-date. 2. Can secure strong commitment from industry. **Disadvantages** 1. Funds will have to come from those available to state departments of vocational education. 2. Potential for this to mushroom into something large and infringe on the territory of teacher training institutions.	**Resistance Potential** Resistance by state departments of vocational education because this takes away funds and some control.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Provide funds for vocational-education private-sector cooperation demonstration sites.	1. Serves as as a source of information as to what works in VEPS relations. **Disadvantages** 1. Questionable as to whether the system of diffusion will make this effort worthwhile.	Little resistance. May be some discontent about the selection of demonstration sites. Some may raise the issue that demonstration projects have done little to foster VEPS cooperation.
Initiate federal insurance programs to cover liabilities of vocational education students and faculty who work in industry.	**Advantages** 1. Reduces the reluctance of industry to participate in programs where outside personnel must be in the plant. **Disadvantages** 1. Cost to government. 2. Will not be cost-effective without extensive use by vocational education industrial facilities.	**Resistance Potential** That the visibility detracts from the funds available to state may be some resistance.
Establish multi-agency technology priority councils (TPCs) to develop training priorities.	**Advantages** 1. Secure multi-agency commitment. 2. Creates a source of leadership in VEPS cooperation. **Disadvantages** 1. Questionable as to whether priorities will be observed.	**Resistance Potential** Vocational education agencies may raise questons about priority development being out of their control.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Provide funds for target demonstration projects to develop vocational-education private-sector cooperative structures to address specific problems.	1. Encourages independent thinking and planning of cooperative arrangements. 2. Provides exemplary demonstration sites that can be a source of information. **Disadvantages** 1. Diffusion of exemplary practices may take some time. 2. Difficulty in selecting target problems and target sites.	Little resistance.
Provide funds for registry of employees from state-of-the-art industrial facilities who are available for loan to vocational institutions.	**Advantages** 1. Formalizes a system of getting instructors from industry on loan. Makes it convenient for vocational educators. **Disadvantages** 1. Industries may not want to make such a commitment without a substantial incentive.	There will be an unwillingness of industry to participate in this program.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Sponsor speciality training centers or centers of excellence.	1. Ensures that vocational education keeps abreast of technology in most program areas. 2. Secures commitment from industries and gives them good reason to participate. **Disadvantages** 1. These centers would be widely dispersed. 2. A rotation or diffusion system must be developed to ensure that knowledge is difficult.	There may be a strong sentiment to create these centers in already-existing institutions. This will detract from the program and would make securing industry involvement and commitment difficult.
Align national and local industry-education cooperative structures.	**Advantages** 1. Creates a structure to ensure vocational education private sector collaboration. 2. Fosters potential for strong national leadership in encouraging cooperative ties.	**Resistance Potential** Strong resistance from advisory councils

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Establish adopt-a-program cooperative relationships.	1. Promotes closer relationships between school and work. 2. Gives more responsibility to participating industires. **Disadvantages** 1. Potential for industry to exert control over program. 2. Difficulty in getting industries to participate in this manner.	Little resistance by the vocational education community because of the potential for high-quality programs. Industries cannot be forced to participate. They may resist because of the increased commitment.
Initiate vocational-education private-sector cooperation foundations supported by a small cooperative tax.	**Advantages** 1. Serves as a source of funds for vocational education. 2. Secures some industrial commitment from the private sector. Disadvantages 1. Unwillingness of corporations to pay additional taxes. 2. Industry will exert some control over the use of funds.	Heavy resistance by industry because of the increased loss to them and the sentiment in some areas that vocational education does not help.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Require industrial experience component in most vocational education programs.	1. Acts as an avenue for securing industrial involvement. 2. Gives industrial exposure for students. 3. Provides better-quality training. **Disadvantages** 1. Extends the length of programs. 2. May be burdensome to vocational education. 3. May disccourage industry participation in the program.	Much resistance by vocational education because of the increased burden and responsibility and the threat to program enrollment.
Formulate industry-education cooperation plan.	**Advantages** 1. Secures more commitment from industry. 2. Allows nature of cooperation to be evaluated before operation. 3. Creates close bonds by formalizing the relationship. **Disadvantages** 1. Perceived burden on industry and vocational education. 2. Plan can easily become a compliance document only. 3. May deter industry from participating in vocational education programs.	**Resistance Potential** Much resistance by vocational education and the private sector because of the increased burden.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Establish a nation-wide network of equipment banks.	1. Enhances cost-effectiveness of vocational education programs. 2. Creates potential for securing previously unavailable equipment. **Disadvantages** 1. Cost of setting up network. 2. Questionable as to whether equipment will be up-to-date.	Little resistance since vocational education will be receiving free equipment and industry will be making voluntary donations.
Create in-school (or in-plant) production shops.	**Advantages** 1. Bridges the gap between education and work. **Disadvantages** 1. Requires restructuring of current vocational education instructional strategies.	**Resistance Potential** Some industries may consider the school a competitor. Some unions may protest. Some resistance from the vocational education community can be expected.

INITIAL EVALUATION (continued)

Policies	Advantages	Resistance Potential
Issue federal contracts to industries for training services.	1. Bridges the gap between education and work. 2. Advances currency of technical knowledge. **Disadvantages** 1. May ignore some basic vocational education values.	Vocational Education community will resist because it may perceive this infringement on its rights.
Fund the development of entrepreneurial training and production centers.	**Advantages** 1. Promotes cooperation with industry in neutral ground. 2. Bridges gap between education and work.	**Resistance Potential** Some industries may look unfavorably on the the idea because of the potential of increased competition.

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